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Secondary traumatic stress (compassion fatigue): a study in allied medical sciences

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SECONDARY TRAUMATIC STRESS (COMPASSION FATIGUE) : A STUDY IN ALLIED MEDICAL SCIENCES

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A thesis submitted to the Faculty of Arts, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Master of Clinical Psychology.

Johannesburg, 1999

DECLARATION

I declare that this thesis is my own, unaided work. It is being submitted in partial fulfilment of the requirements of the Masters Degree in Clinical Psychology at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university or institution.

Pamela June Durrant

.....day of.....1999

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ABSTRACT

This longitudinal research sought to investigate whether students (n=100) in the allied medical sciences of Physiotherapy (1997 and 1998 3rd year students) and Occupational Therapy (1998 3rd year students) are at risk of developing symptoms of compassion fatigue (which is identical to and presents in the same way as secondary traumatic stress disorder (STSD) and thus is the equivalent of PTSD). It also sought to investigate whether physiotherapy and occupational therapy students differ in the degree of risk and if a trend emerged within the groups that indicates that exposure to more traumatically injured types of patients contributes more to this risk than exposure to other patients. The study, in addition, investigated whether it is invariant that strong perceived social support reflects lower degrees of risk of compassion fatigue.

The dependent variable of risk of compassion fatigue was captured by using the Compassion Fatigue Scale (CFS) developed by Figley (1995) while Joseph et al's (1992) Crisis Support Questionnaire (CSQ) was used to measure the perceived social support variable. The psychometric properties of both the CFS and the CSQ were sound and supported the use of these instruments in the study. The statistical procedures used to analyse the data were simple descriptive statistics such as means, frequencies, standard deviations, t-tests, partial correlations. A number of open-ended questions were administered at the end of each questionnaire in order to illuminate the findings. Observations were measured, in this interrupted time series design, on seven different occasions during a 9 month period in 1997 and again in 1998 (physiotherapy students) and on four different occasions during 1998 (occupational therapy students) - overall 18 data collections and 597 questionnaires.

The results indicate that the students are at risk of compassion fatigue (STSD), that there is no difference in the degree of risk between physiotherapy and occupational therapy students' post

patient exposure, and that there is a trend within both the 1997 and 1998 groups which indicates that exposure to the more traumatised patient contributes to this risk to a greater degree than does exposure to other patients. Although intuitively it was hypothesised that perceived social support may ameliorate the degree of risk of compassion fatigue (STSD) no significant consistency is found between the two. Some practical recommendations are suggested which may assist in reducing this risk in future physiotherapy and occupational therapy students. Some future research suggestions are also given.

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CHAPTER 1

LITERATURE REVIEW

1. Introduction

> "For the past one-and-a-half decades, traumatic stress, virtually embodied as Post Traumatic Stress Disorder, has been conceived as a medical diagnosis that has required experiencing "an event that is outside the range of usual human experience and that would be markedly distressing to almost anyone" (American Psychiatric Association {APA}, 1987, p.250). Because caregiving is an event that many people will encounter at some time in their life, it is not likely that most experiences of caregiving can be described as "outside the range of usual human experience". However, a powerful witness is arising in the literature that suggests being exposed to another's traumatic material has the potential of producing traumatic stress in the caregiver (see for example, Figley, 1995; McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995)" (Hudnall Stamm, 1995, p. xvi).

Literature in the field of trauma, and especially Post Traumatic Stress Disorder (PTSD), has shown that traumatology has inadvertently ignored individuals who are traumatized as a result of their compassion for others. The capacity for compassion and empathy seems to be at the core of peoples' ability to be caregivers (Hudnall Stamm, 1995) and caregivers often come face to face with the fact that "the world is full of death, hate, violence and evil" (Hudnall Stamm, 1995, p. x) in their work with victims/patients. As pointed out by Ursano, Grieger and McCarroll (1996) professional caregivers confront trauma on a predictable, although episodic, basis.

The study of trauma has refocused the issue of the impact of reality on psychological, biological, and social systems and has firmly established that exposure to overwhelming experience is an undisputed etiological factor in many psychological problems (Fullerton et al, 1992c; Fullerton & Ursano, in press; Green, Grace & Gleser, 1985; Turner, 1981 in Ursano, Grieger and McCarroll, 1996). Researchers used to assume that stresses had cumulative effects, but did not take into account the fact that certain acute traumatic events were capable of breaking the human capacity to adapt appropriately (ibid.). Now it is known that there is a categorical difference between the impact of traumatic stressors and that of day-to-day life stressors. Figley (1995) states that The Diagnostic and Statistical Manual of Mental Disorders

(DSM-IV, APA, 1994) notes, but does not discuss, the implications of a person's being confronted with the pain and suffering of others and he, (Figley,1995), McCann & Pearlman, (1990); Pearlman & Saakvitne, (1995), Hudnall Stamm (1995) and others all suggest that caregivers experience secondary traumatic stress through exposure to anyone who suffers.

Secondary traumatic stress (STS) and compassion stress are different terms which describe, according to Figley (1995), the same symptoms. He, Figley (1995, p.7) defined compassion stress "as the natural consequent behaviours and emotions resulting from knowing about a traumatizing event experienced by a significant other - the stress resulting from helping or wanting to help a traumatized or suffering person". Prolonged exposure to compassion stress can result in *compassion fatigue* which is identical to secondary traumatic stress disorder (STSD) (Figley, 1995) and has the same symptoms as, and is nearly identical to, Post Traumatic Stress Disorder (PTSD) except PTSD symptoms are directly connected to the person experiencing primary traumatic stress. It is a state of exhaustion and dysfunction - biologically, psychologically and socially - as a result of prolonged exposure to compassion stress and everything that this provokes.

This assertion that all people in caring professions are at risk of secondary traumatization or what Figley (1995) terms "compassion fatigue" and, that in spite of the clear identification of this phenomenon as a form of traumatization in the DSM-IV it has been given little attention, was the motivation for a 1997 longitudinal study by Durrant (1997). This study assessed the degree of risk of compassion fatigue for caregivers using as a sample 3rd year physiotherapy students at the University of the Witwatersrand. It assessed whether these students, who were studying to be professional caregivers and who were treating patients for the first time, were at risk of compassion fatigue (STSD) and if so, to what degree. The results of this longitudinal research indicated that the assertions made in the literature were valid and that these caregivers were at high risk of compassion fatigue. It also indicated that there was a trend which suggested that exposure to the more "traumatized patients" raised the degree of risk while exposure to patients who were suffering, but had not experienced acute trauma, lowered the degree of risk.

The purpose of this current research is to ascertain whether the 1997 results can be replicated as well as extended to a wider population of students in allied medical sciences within our South African context and specifically to students studying to be professional caregivers in the medical sciences of Physiotherapy and Occupational Therapy at the University of Witwatersrand.

This study will focus on what the degree of risk is; whether there is a difference in risk between the allied medical sciences, and whether the trend indicated in the 1997 results is replicated which would indicate that exposure to certain types of patients does contribute to a greater or lesser degree to this risk. In addition it will investigate whether there is always a correlation between perceived social support and the degree of risk for compassion fatigue (STSD). The 1997 study results indicated a negative correlation between the degree of risk of compassion fatigue and perceived social support.

This literature review will, therefore, focus on the areas of trauma; Post Traumatic Stress Disorder; the concept of Secondary Traumatic Stress Disorder (STSD/Compassion Fatigue), its symptoms and how it can develop within caregivers in the helping professions; contrast STS (compassion stress) and countertransference; STS and burnout; STSD and vicarious traumatization and refer to the role that social support may play in alleviating the impact of traumatic stress.

2. Trauma

An experience can be understood as traumatic if it is "sudden, unexpected or non-normative, exceeds the individual's perceived ability to meet its demands, and disrupts the individual's frame of reference and other psychological needs and related schemes" (McCann and Pearlman, 1992, p.10). Trauma is defined by van der Kolk (1996) as an inescapably stressful event which overwhelms people's existing coping mechanisms. "Traumatic events overwhelm the ordinary systems of care that give people a sense of control, connection, and meaning" (Herman, 1992, p.33). The DSM-IV (1994) describes trauma as both a stimulus and a response:

A (1) *an extreme stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate (p.424)*

A (2) the person's response involves intense fear, helplessness, or horror.

Thus as stated by Figley (1995, p.4) "mere knowledge of another's traumatic experiences can be traumatizing". McCann and Pearlman (1990) in their article on vicarious traumatization also note, "therapists are not immune to the painful images, thoughts, and feelings associated with exposure to their clients' traumatic memories" (McCann & Pearlman, 1990, p.132). "Working with trauma confronts everyone with the essence of human suffering, with 'man's inhumanity to man' and with the essential lack of purity of people's interactions with each other. Individuals, and even entire cultures, build up elaborate defences in order to keep these stark realities out of conscious awareness" (van der Kolk, 1996, p.43). This assertion is supported by Judith Herman (1992) who also states that the study of psychological trauma has a history of episodic amnesia and that, in spite of the vast literature documenting it, debate still questions whether these phenomena are credible and real because this study repeatedly leads the investigator into "realms of the unthinkable and foundered on fundamental questions of belief" (Herman, 1992, p.7). It appears to be impossible to remain a neutral bystander when confronted by horrible events and human nature's capacity for evil (Herman, 1992) and Herman states that it is tempting to take the side of the perpetrator for this requires no response from the witness, while to side with the victim requires the sharing of pain. Herman (1992) states that all the perpetrator asks is that the bystander do nothing which appeals to the universal desire to "see, hear and speak no evil".

Caregivers work within specific cultural contexts and, in this study, they live in a country where violence is "an inextricable part of daily life" (Esprey, 1996, p.1) which is either witnessed directly on the streets or indirectly on television screens or in newspapers. Caregivers can experience conflicting interests between their allegiance to their patients on the one hand, and, their feelings and attitudes towards this same patient who might be a perpetrator of a violent or heinous act. Especially in the present South African context many

primary caregivers, for example, doctors, interns, physiotherapists and occupational therapists who work in State hospitals, are required to treat rapists, hijackers and murderers. Professional caregivers may protect themselves by distancing themselves from people's suffering and sometimes by stigmatizing and blaming the victims. If their intervention and treatment is to be effective these feelings and attitudes must somehow be dealt with (van der Kolk, 1996). In order for traumatic reality to be held in consciousness it is necessary that there be a social context that affirms and protects the victim of the trauma for "repression, dissociation and denial are phenomena of social as well as individual consciousness" (Herman, 1992, p.9).

Talbot, Manton and Dunn (1991) also state that mental health professionals are affected by the circumstances in which they work. They believe that trauma or disasters are not situations to which one can become accustomed, rather there is a need to develop ways of dealing with such experiences. They state that post-traumatic stress reactions of caregivers who attend crises are similar to those of the victims themselves. The caregiver can feel overwhelmed with responsibility for the patient, be unable to reduce compassion stress and experience traumatic memories that stimulate symptoms of PTSD (compassion fatigue) as well as depression and generalized anxiety. Figley (1995, p.15) states "If we are not empathic or exposed to the traumatized, there should be little concern for compassion fatigue".

These assertions suggest that all people in caring professions are at risk of secondary traumatization (compassion fatigue) and this study will investigate the degree of risk of compassion fatigue for 3rd year physiotherapy and 3rd year occupational therapy students at the University of the Witwatersrand, who are treating patients in South African state hospitals and clinics for the first time.

Literature (McCann & Pearlman, 1990) also asserts that people who work with victims may find their cognitive schemas and imagery system of memory altered or disrupted by long term exposure to the traumatic experiences of their "victim" clients. McCann and Pearlman (1990) state that mental health professionals who spend a significant proportion of their professional time doing therapy with, or treating, traumatized people can experience painful images,

thoughts and feelings associated with exposure to their clients' traumatic memories and that these reactions can occur as a short-term reaction to working with particular clients, (Blank, 1987; Danieli, 1981; Lindy, 1988 cited in Moosa, 1992) or as a long-term alteration in the therapist's own cognitive schemas, or beliefs, expectations and assumptions about self and others. McCann and Pearlman (1990) maintain that caregivers may experience painful images and emotions associated with their patient's traumatic memories and may, over time, incorporate these memories into their own memory systems. As a result they may find themselves experiencing PTSD symptoms, including intrusive thoughts or images and painful emotional reactions. They state that the helper must be able to acknowledge, express and work through these painful experiences in a supportive environment because, if these feelings are not openly acknowledged and resolved, there is the risk that the helper may begin to feel numb or emotionally distant, and thus be unable to maintain a warm, empathic, and responsive stance with clients. Caregivers need to understand how their own schemas are disrupted or altered through the course of their work and how this will shape the way in which they respond to patients.

McCann and Pearlman (1990) suggest that caregivers need to be aware of their own psychological needs in order to be able to process trauma material effectively and thus limit its impact upon their schemas. People who work with victims may experience profound psychological effects, effects that can be disruptive and painful for the caregiver and can persist for months or years after the work (McCann and Pearlman, 1990). Jung (1966 cited in McCann and Pearlman, 1990) wrote of "unconscious infection" being the result of working with the mentally ill while English (1976 cited in ibid.) stated that he himself felt the emotional needs and distresses of people in difficulty, through the process of empathy, as well as tending to absorb them within himself.

Over one hundred years ago, in 1889, Pierre Janet (van der Kolk, Brown, and van der Hart, 1989) published L'automatisme Psychologique on how the mind processes traumatic experiences. Janet (ibid) believed that the individual's state of mental preparation determined the degree of physiological arousal in the face of threat. He believed it not to be so much the traumatizing event but the intensity of the *emotional reaction* to that event which determines

whether an event precipitates post traumatic psychopathology or not. Currently, according to the literature reviewed, the conceptualisation of post traumatic psychopathology would include Post Traumatic Stress Disorder as well as Secondary Traumatic Stress Disorder or Compassion Fatigue. Present day literature (van der Kolk, Brown and van der Hart, 1989) confirms Janet's findings and also shows that the individual's state of mental preparation determines the degree of physiological arousal in the face of threat. This suggests that caregivers, as well as students within caring professions, need to be mentally prepared for dealing with the traumatic experiences of others in order that the intensity of their *emotional reactions* is ameliorated and thus their risk of post traumatic psychopathology lowered.

Janet's conceptualisation, even a century later, provides an excellent framework for integrating current knowledge about the psychodynamic, cognitive and biological effects of human traumatization since the central psychoanalytic tenet, that most psychopathology is the result of childhood intrapsychic conflict between unacknowledged instinctual drives and external reality, has left little room for this (van der Kolk, Brown, and van der Hart,1989). Janet argued that passionate emotions, (and in light of the above even minor events can precipitate violent emotional reactions), interfere with accurate appraisal and appropriate actions and that failure to fully confront a traumatic experience leads to dissociation of the traumatic memories and their possible return later on as fragmentary reliving experiences. Janet (van der Kolk et al, 1989) believed that there is an interplay between action and memory and that a person needs to attach a verbal representation to an experience in order to attach it to other memories so that the mind can successfully process the traumatic experience. The successful integration of a particular experience will depend on the subjective interpretation of that event. In support, subsequent research (van der Kolk, 1996, p.296) shows that traumatic experiences, in contrast with the way people process ordinary personally significant information by collating and transcribing it into personal narratives, are initially imprinted as sensations or feeling states. Frightening or traumatic experiences might not fit into already existing cognitive schemes and thus traumatic memories are stored in a state-dependent fashion, which can render them inaccessible to verbal recall for prolonged periods of time (van der Kolk,McFarlane and Weisaeth 1996). They may, therefore, fail to be integrated unless the individual, via the creative act of memory organizes, categorizes and transforms the experience into already

existing cognitive schemes (van der Kolk, 1996). This suggests that it is necessary for caregivers to be encouraged to verbalise their experiences and feelings after they have treated patients who have had traumatic experiences.

Van der Kolk, McFarlane and Weisaeth (1996) state that although the human response to trauma is universal it cannot be understood from one frame of mind alone and that there is a need for this subject to be approached with a "blend of objective science and an awareness of the sociopolitical contexts in which trauma is embedded" (Van der Kolk, McFarlane and Weisaeth, 1996, p.ix). Systems theory and general systemic thinking (Jordaan & Jordaan, 1989, p.44) hypothesise that there is always a complicated interrelationship between "the developing person (the integratedness of the biological and the intrapsychic as a psychobiological unity) and the "world-out-there" (the ecological and metaphysical)." These assertions would suggest that the present study, which is undertaken within a South African social and political context characterised by violence and trauma, may indicate that there is an elevated degree of risk of secondary traumatization (compassion fatigue) as inevitably most South Africans are exposed on a daily basis to the traumatic experiences of others.

Erikson (1963, 1967) described the human's first developmental achievement in the social world, and the foundation upon which all subsequent developmental accomplishments rest, as the capacity for basic trust. Children receive from parents "a firm sense of personal trustworthiness within the trusted framework of their community's lifestyle" (Erikson cited in Munroe, Shay, Fisher, Makary, Rapperport and Zimering, 1995, p.211). An event can be defined as traumatic to the degree to which it violates this sense of basic trust. A traumatic event may, as noted by Janoff-Bulman (1992), shatter a victim's fundamental assumptions that "the world is benevolent, the world is meaningful and that the self is worthy". Brom and Kleber (1989) agree with Janoff-Bulman that a traumatic experience shatters one's basic assumptions and beliefs about the world and oneself and, in addition, they reflect as to why some people cope better than others with serious life events as well as what it is that may possibly help prevent disorders or psychopathology. They state that working through a serious experience extends over a certain period of time and that phases can be distinguished in this process. The nucleus of this normal process of coping is formed, according to Brom and

Kleber (1989) by the handling of the experience of powerlessness, the disruption, and the often very intense emotions which arise after the traumatic event, but, in addition, they suggest that one of the ways of coping with traumatic life events may be the attempt to find meaning in what seems so often a meaningless and unjust event. This echoes Victor Frankl's view that it is only those people who can find meaning, even in supremely horrifying conditions, who are capable of living with courage and dignity. Frankl, in his observations of Nazi concentration camp inmates during his imprisonment in 1944/45, came to believe that the need to find meaning is man's most urgent need (Meyer, Moore, Viljoen 1988) and is the "primary motivation in his life and not a 'secondary rationalization' of instinctual drives" (Frankl, 1984, p.121). Van der Kolk (1996, p.296) also states that people seem unable to accept experiences that have no meaning and that they try to make sense of what they feel and that once intrusive elements of trauma become conscious people are likely to "fill in the blanks" and complete the picture and thus these memories are prone to distortion. Horowitz (1976) also asserted that in order to recover from the effects of trauma it is important for an individual to give meaning to traumatic experiences. It is beyond the scope of the current study to investigate the hypothesis that some people cope better than others with serious life events because they give meaning to traumatic experiences. However, it is expected that, if it is the case that the giving of meaning is an important mechanism of coping with traumatic situations, then there will be evidence of this in the current study.

In present day South Africa violence and trauma are an inextricable part of daily life (Esprey, 1996) and thus, according to the literature reviewed, so is secondary traumatic stress (STS or compassion stress) which is characterized by fatigue, emotional strain and the risk of burnout (Figley, 1995). In addition the present working conditions in South African state hospitals and clinics are themselves traumatic. There is a general shortage of expertise, staff, funding, beds and equipment. Student primary caregivers, such as doctors, interns, physiotherapists and nurses who work in the trauma wards of hospitals, often have little supervision and inadequate support and they, as Hudnall Stamm (1995) notes, are likely to see far more of the sequalae of trauma than other therapists who only later attend to patients. Hudnall Stamm (1995) also suggests that current medical school training rarely provides trauma-related training to these primary care providers.

The present study focuses on Physiotherapy students and occupational therapy students, who are primary caregivers working in South African community clinics and state hospitals under stressful and unsatisfactory conditions. They deal with people who both live in violent communities and who are treated in hospital settings because, mostly, they have experienced traumatic events. Thus, according to present literature and the growing awareness in the field of traumatology of the extraordinary extent of the impact of trauma, especially in the work of Figley (1995), it appears that these students are inevitably exposed to Secondary Traumatic Stress (compassion stress) and thus at constant risk of Secondary Traumatic Stress Disorder (which as stated is equivalent to Post Traumatic Stress Disorder).

There appears to be an extensive knowledge base on the psychological consequences of traumatic experiences for victims, but less attention has been focused on the enduring psychological consequences for caregivers exposed to the traumatic experiences of their clients. This study will focus on the psychological consequences for caregivers exposed to the traumatic experiences of their patients and hopefully fill some of the gaps in the literature.

3. Post Traumatic Stress Disorder

The DSM-IV (American Psychiatric Association, 1994 - see appendix 3) states:

> "The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms following exposure to an extreme stressor involving direct personal experience of an event that involves threatened death, actual or threatened serious injury, or threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or *learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associates".* (Criterion A1, p.424, cf. Figley, 1995, p.4)

The italicized phrases emphasize that people can be traumatized without actually being physically harmed or threatened with harm. They can be traumatized simply by learning about the traumatic event.

There are three main clusters of symptoms in PTSD ; the intrusive; the avoidant and the hyperarousal clusters. Intrusions can manifest as repeated, unwanted and uncontrollable thoughts of trauma, and can include nightmares or flashbacks (Figley, 1995; Harris, 1995; Yasen, 1995; Herman, 1992). Avoidance symptoms consist of the person's attempts to reduce exposure to people or places that may elicit memories of the event (or intrusive symptoms) and

involves symptoms of social withdrawal, emotional numbing and a sense of a loss of pleasure. Hyperarousal refers to the physiological signs of increased arousal, such as hypervigilance, or increased startle response (DSM-IV, APA, 1994). Herman (1992a) suggests that Post Traumatic Stress Disorder (PTSD) could be viewed as contagious and requiring precautions for the protection of therapists.

Post Traumatic Stress Disorder (PTSD)symptoms are equivalent to Secondary Traumatic Stress Disorder (STSD), according to Figley (1995, p.xv) who writes: "compassion fatigue is identical to secondary traumatic stress disorder (STSD) and is the equivalent of PTSD". These symptoms of PTSD, as well as reduced responsiveness, anxiety and guilt (Comer,1995) may begin either shortly after a traumatic event or months or even years later. PTSD, and inferentially STSD, should be seen, according to van der Kolk, McFarlane and Weisaeth (1996) as the result of a complex interrelationship among psychological, biological, and social processes which are affected by both the victim's maturational level and length of exposure to the trauma. The idea behind PTSD, and inferentially STSD, according to McFarlane and Girolamo (1996) is that there is a generalized reaction pattern to traumatic events. Summerfield (1997 cited in Jacobs, 1998) states that although these reactions are disturbing they are considered to be *normal responses to abnormal events.*

4. The Concept Of Secondary Traumatic Stress Disorder or Compassion Fatigue

As the field of trauma has grown so it has become increasingly apparent that the effects of traumatic events go beyond those who directly experience them (i.e. beyond the primary victim) (Munroe, Shay, Fisher, Makary, Rapperport, and Zimering, 1995). STSD is a syndrome of symptoms nearly identical to PTSD except that exposure to a traumatizing event experienced by one person becomes a traumatizing event for the second person. In fact Figley (1995, p.11) suggests that "PTSD should stand for *Primary* Traumatic Stress Disorder, rather than *Post* Traumatic Stress Disorder, since every stress reaction is "post" by definition.

Figley (1995) defines **compassion fatigue** (STSD) as a state of exhaustion and dysfunction - biologically, psychologically and socially - as a result of prolonged exposure to compassion stress and all that it evokes and McCann and Pearlman (1990) argue that compassion fatigue is

a predictable reaction to the stressful and sometimes traumatizing work with victims/patients.

Compassion stress (STS) is defined by Charles Figley (1995), as the stress and natural consequent behaviours and emotions resulting from knowing about a traumatizing event experienced by a significant other - the stress resulting from helping or wanting to help a traumatized or suffering person and is a function of six interacting variables - *empathic ability* (defined as the ability to notice the pain in others); *emotional contagion* (defined as experiencing the feelings of the sufferer as a function of exposure to the sufferer); *empathic concern* (the motivation to act); *empathic response* (the effort to help relieve the suffering); *sense of achievement* (in the effort to relieve suffering) and *disengagement* (defined as the extent to which the helper can distance him/herself from the ongoing misery of the sufferer) (see Figure 1 & 2 p.102). It is possible for caregivers to have considerable empathic ability and empathic concern while being exposed to enormous emotional contagion, feel a sense of achievement because their empathic response has relieved suffering and still experience very little compassion stress because they have avoided over identifying or becoming obsessed with the difficulties of the sufferer (Figley,1995).

Figley (1995) states that the predictable physiological responses or reactions to traumatic incidents, that is restlessness, irritability, excessive fatigue, sleep disturbances, anxiety, startle reactions to pressure, nightmares, vomiting and diarrhoea, in other words all the symptoms comparable with compassion fatigue, are dysfunctional and can sap energy, leave the person vulnerable to illness and be destructive if these stress responses are denied or if misinterpreted as being something wrong with the person.

5. Who is at Risk for Compassion Fatigue/STSD?

Figley (1995) presents two models (see figures 1 & 2 p.102) which endeavour to account for how and why some people develop compassion fatigue/STSD whilst others do not. The main concepts are empathy and exposure. Empathy is considered the main factor in the induction of trauma from the primary to the secondary "victim" since empathy enables one to understand another person's experience, however, in the process the trauma caregiver can become traumatized. Children's trauma is especially considered to be provocative for trauma

caregivers (Dyregrov & Mitchell, 1992). "If we are not empathic or exposed to the traumatized, there should be little concern for compassion fatigue" (Figley, 1995, p.15).

In addition, it is suggested that unresolved trauma belonging to the trauma caregiver may be activated if confronted with similar trauma to the patient's traumatic experience (Herman, 1992). Figley (1995) argues that caregivers who begin to view themselves as saviours, or at least as rescuers, are very vulnerable to emotional contagion. Caregivers are vulnerable human beings who have all the normal physical and psychological responses to the horror of human suffering. Any unresolved trauma of the caregiver will also often be activated by reports of similar trauma in clients and the importance of pre-event exposure to other traumatic occurrences has been noted by several researchers (Esprey, 1996; Green et al, 1985a; Wilson, 1989; Emery et al, 1991). Green et al (1985a) assert that prior stressful events may affect an individual's appraisal of a situation and possibly increase that person's vulnerability to psychological neuroses. This commonly-held hypothesis, that therapists who have experienced the same type of trauma as their clients may be more vulnerable to adverse effects or countertransference reactions, was not supported in a study carried out by Kassam-Adams (1995). However, it was found that trauma which occurred in childhood appeared to be most closely associated with secondary trauma symptoms in the therapist/caregiver (Kassam-Adams, 1995).

Thus it appears that any caregiver who works with traumatized people and who has empathy is at risk for compassion fatigue. In addition, should the caregiver have experienced trauma themselves during their childhood they are more vulnerable to secondary traumatic stress and STSD.

6. Secondary Traumatic Stress (STS/Compassion Stress) and other Concepts

The terms for secondary traumatic stress are many and varied: compassion fatigue (Figley, 1995), vicarious traumatization (McCann & Pearlman,1990), secondary wounding, event countertransference (Danieli, 1994), secondary victimization (Figley, 1982, 1983b, 1985a, 1989 cited in 1995); co-victimization (Hartsough & Myers, 1985 cf. Figley, 1995); secondary survivor (Remer & Elliot, 1988a, 1988b cf Figley, 1995) and burnout (Williams & Sommer,

1995). Miller, Stiff, and Ellis (1988 cf Figley, 1995) coined the term "emotional contagion" to describe an affective process in which "an individual observing another person experiences emotional responses parallel to that person's actual or anticipated emotions" (ibid., p. 254). Most of these terms are associated with the "cost of caring for others in emotional pain" (Figley, 1995, p. 9). Figley (1995) suggests that compassion stress and compassion fatigue are appropriate substitutes for these terms, which he suggests in order that helping professionals are not labelled with a disorder but rather associated with the cost of caring.

Although these terms refer to many differing types of secondary traumatic stress reactions, they all have in common the underlying recognition that trauma work is difficult, challenging, and often exhausting for those who undertake it, no matter their profession, gender, age, or level of training and experience (Williams & Sommer, 1995). Perhaps the most important concepts that parallel compassion fatigue (STSD), and thus the ones that need to be elucidated and contrasted, are "countertransference", "vicarious traumatization" and "burnout".

6.1 Countertransference and Compassion Stress/ STS

McCann and Pearlman, (1990), state that countertransference literature also provides a useful background for understanding compassion fatigue/STSD. The concept of countertransference is connected with psychodynamic therapy and often appears to be an emotional reaction to a client by a therapist (Figley, 1995). It is often assumed that countertransference only happens within the context of psychotherapy, that it is a reaction by the therapist to the transference actions on the part of the client and that it is negative and thus should be prevented or eliminated (Figley, 1995). Corey (1991 cited in Figley, 1995) defined countertransference as the process of seeing oneself in the client, of over-identifying with the client, or of meeting needs through the client. Racker's (1950, cited in Moosa, 1992) concept of empathic, or concordant identification, describes the process which occurs when a therapist identifies with an aspect of the patient's feelings. The feelings experienced are often reflections of feelings which the patient is unwilling or unable to verbalize and which stem from conscious or repressed aspects of the patient's life. Countertransference was once viewed simply as the therapist's conscious and unconscious response to the patient's transference, especially if it connected with the past experiences of the therapist. Johansen (1993 cited in Figley, 1995)

suggests that a contemporary perception of countertransference views it as all of the emotional reactions of the therapist toward the patient - regardless of their sources (e.g. the past or present life stressors experienced by the therapist), but also includes the therapist's absorption of the traumata expressed by the client.

One could argue then that compassion stress (secondary traumatic stress) includes but is not limited to what these researchers and other professionals view as countertransference. However, secondary traumatic stress is a natural consequence of caring between two people: one who has been traumatized initially and the other who is affected by the first's traumatic experience. Unlike countertransference, a reaction by the therapist to the transference actions of the client which is assumed only to occur within the context of psychotherapy and which is sometimes perceived to be a negative consequence which should be prevented or eliminated, compassion stress is viewed as a natural by-product of caring for traumatized people (Figley, 1995) and these effects are not necessarily a problem.

Moosa (1992) states that there is a dearth of research into the responses of significant other people to the predicament of traumatized individuals, but that some of the limited information available (Straker, 1988 cited in Moosa, 1992) suggests that the parents of traumatized youth in particular circumstances may experience feelings of helplessness and hopelessness. This suggests that caregivers or others who work closely with victims may also experience these emotions. Moosa (1992) states that traumatic stress evokes strong countertransference reactions in mental health workers and may cause responses which range from facilitating empathic reactions, to resistances which may result in errors in therapy and treatment and thus she suggests that caregivers need to become more conscious of the role of countertransference in their work with traumatized individuals.

6.2 Vicarious Traumatization and Compassion Fatigue/STSD

Vicarious traumatization (McCann & Pearlman, 1990) is a term which has been used to describe disruptive and painful psychological effects which may develop in health professionals who work with survivors of traumatic events. These effects have been distinguished from more general concepts, such as countertransference and burnout, in that the secondary post

traumatic stress reaction is a response to characteristics of disclosed traumatic events which the caregiver has not experienced directly (Danieli, 1985 cited in Chrestman, 1995).

Vicarious traumatization differs from STSD in focus and context (McCann & Pearlman, 1995). STSD is based on a diagnostic conceptualisation of PTSD (DSM-IV; APA, 1994) which mainly focuses on observable symptoms and gives context and etiology less attention. In contrast vicarious traumatization, as a concept, is a holistic approach to the individual where "meaning and relationship are integral parts of the human experience" (McCann & Pearlman, 1995, p.153). The two concepts complement one another and combined, they provide material for in-depth analyses of traumatic stress reactions.

McCann and Pearlman's (1990) notion of vicarious traumatization is *broader* than countertransference as it implies that much of the therapist's cognitive world will also be altered by the hearing of clients' traumatic material. It is their belief that all therapists working with trauma survivors will experience lasting alterations in their cognitive schemas, which will have a significant impact on the therapist's feelings, relationships and life. They state that "vicarious traumatization" is a predictable reaction, a similar reaction to PTSD (van der Kolk, 1996) to the stressful and sometimes traumatizing work with victims/patients. Rosenbloom, Pratt & Pearlman (1995, p.67) state : "It is important to emphasise that such responses on the part of the helper are *not* viewed as pathological; just as Post Traumatic Stress Disorder (PTSD) is viewed as a normal reaction to an abnormal event, vicarious traumatization *is* a normal reaction to the stressful and sometimes traumatizing work with victims. And just as interventions may be very healing for individuals suffering from symptoms of PTSD, helpers may also find relief from symptoms related to vicarious traumatization". Rosenbloom, Pratt & Pearlman (1995) state that the effects of vicarious traumatization (STSD) are modifiable and that there are things helpers can do to minimize and ameliorate the negative impact of trauma work. Results of a study by Kassam-Adams (1995) strengthen the argument for a model of vicarious traumatization or STSD rather than generic occupational stress or burnout in accounting for therapists' responses to trauma clients (Kassam-Adams, 1995).

6.3 Burnout and Compassion Stress/STS

Some theorists (Maslach & Jackson, 1981; Pines, 1993) view the problems faced by caregivers and workers with job stress as burnout. Burnout, according to Pines and Aronson (1988, 1989 cited in Figley, 1995, p.15), is a "state of physical, emotional and mental exhaustion caused by long-term involvement in emotionally demanding situations". Burnout has been defined as a collection of symptoms associated with emotional exhaustion. It is viewed as a process which begins and becomes progressively worse (Cherniss, 1980; Maslach, 1981). The process includes gradual exposure to job strain (Courage & Williams, 1986 cited in Figley, 1995); erosion of idealism (Freudenberger, 1986; Pines, Aronson & Kafry, 1981 cited in Figley, 1995) as well as a "void of achievement" (Pines & Maslach, 1980 cited in Figley, 1995, p.16) in an "accumulation of intensive contact with clients" (Maslach & Jackson, 1981 cited in Figley, 1995, p.16). Burnout refers to the psychological strain of working with difficult populations, for example, victims of poverty or those with severe social problems (McCann and Pearlmann, 1990) and Karger (1981 cited in Figley, 1995) and Barr (1984 cited in Figley, 1995) note that service providers may be caught in a struggle between promoting the well-being of their clients while, at the same time, struggling with policies and structures in the human service delivery system that tend to stifle empowerment and well-being.

Although burnout literature is relevant to working with trauma victims McCann and Pearlman (1990), suggest that the potential effects of working with trauma survivors are distinct from those of working with other difficult populations because the caregiver is exposed to the emotionally shocking images of horror and suffering that are characteristic of serious traumas. In contrast to burnout, which emerges gradually and is a result of emotional exhaustion, compassion stress/STS can emerge suddenly with little warning (Figley, 1995) and STS includes a sense of helplessness and confusion, a sense of isolation from supporters with the symptoms often disconnected from the real causes. STS also has a faster recovery rate (Figley, 1995).

This study will of necessity need to differentiate between compassion fatigue and burnout. Caregivers, and in this study the physiotherapy and occupational therapy students, are exposed to, and treat, both trauma survivors as well as other difficult populations and thus it is

necessary to separate out these two concepts in order not to confuse and confound the results.

7. Factors that may Contribute to Compassion Fatigue/STSD

The primary risk factor that has been associated empirically with the development of the PTSD, and inferentially the STSD, diagnosis is the level or severity of exposure to stressors (Green, 1994). Green (1994, p.356) states that "intensity of exposure is a clear-cut risk factor for the development of PTSD". With regard to the type of stressor, a variety of types of events have been associated with the development of PTSD : "injury, violent or unexpected bereavement, witnessing or participating in abusive violence, exposure to grotesque death, hearing about the death of another person, life threat, rape, and torture" (March, 1993; Green, 1990, 1993 cited in Green, 1994, p.354). Extent of injury is one type of stressor that does not have consistent findings regarding its association with PTSD. Studies of accidental injury show that extent of objective physical injury is not necessarily the best predictor of outcome (Malt et al., 1989; Malt, 1988; Landsman et al., 1990; Perry et al., 1992 cited in Green, 1994) and that perceived loss of function may play a greater role. Research (Dutton & Rubinstein, 1995) indicates that it is possible for a trauma worker to be exposed to the graphic details of a traumatic event only once to become traumatised.

Other risk factors for PTSD (and thus inferentially STSD), given exposure to a traumatic event, include female gender, early separation from parents, neuroticism, prior trauma especially in childhood, low education/social class, preexisting anxiety or depression, and family history of anxiety or antisocial behaviour (Green, 1994; Norris, 1992 cited in Green, 1994). A study by Norris (1992 cited in Green, 1994) found younger, rather than elderly, subjects to be at higher risk for PTSD. A large proportion of the sample of physiotherapy and occupational therapy students are female and fall within the 20 - 25 year range. In view of the literature it is hypothesised that these risk factors already predispose these students to a degree of risk of compassion fatigue. In addition, to these two risk factors, there may be other predisposing risk factors, such as those suggested by Green, which increases their vulnerability.

8. Factors that may Moderate or Act as a Buffer against Compassion Fatigue/STS Symptoms

If, as literature is suggesting, secondary traumatic stress is inevitable for caregivers, attention needs to be paid as to what may minimise the impact of secondary exposure. Literature (Rosenbloom, Pratt & Pearlman, 1995) suggests that often training programs and work settings, directly or inadvertently, support a position which leaves helpers feeling weak, incompetent, or emotionally unstable if they are affected by their work with clients. It is a more realistic and, therefore a more helpful, position to recognize the inevitability of being affected by the work.

8.1 Social Support

Social support has been identified as a meaningful "method" of alleviating stress. It includes everyday things such as sharing tasks and feelings, exchanging information and affection as well as dramatic but common human experiences. Social support is seen either as directly promoting health and health behaviours or as buffering the adverse effects of stressors (Lepore,Evans and Schneider, 1991). Studies support theoretical notions that social support aids stress resistance by supplying people with the information that they are loved, appreciated, and part of a network of caring individuals (Caplan, 1974; Cobb, 1976 cited in Solomon, Mikulincer, Hobfoll, 1986). This information enhances a feeling of mastery that Bowlby (1982) has related to the earliest attachment experiences. He wrote that social attachment is related to positive feelings from the beginning of life and is reinforced throughout childhood and adolescence. This sense of mastery would be expected to follow from both the emotional component as well as the instrumental components of support. Figley (1995) states that measures that measure the quality and quantity of social support are extremely important in the study of the field of traumatic stress because appraisal of the immediate and long-term effects of traumatic events are significantly affected by the social relationship factor. Social support can reduce the impact on the individual by influencing the appraisal of the event and by providing coping possibilities.

The definition of the construct social support is difficult and complex (Leavy, 1983; Sarason ,

Sarason and Pierce, 1990; Flannery, 1990). There appears to be controversy and debate around the stress/support relationship as the definition of the social support construct is difficult and complex - what exactly is social support? Beels (1981 cited in Leavy, 1983, p.3) defines social support as "whatever factors there are in the environment that promote a favourable course of the illness". Another definition is circular : "social support may be defined as support accessible to an individual through societal ties to other individuals, groups and the larger community" (Lin, Simone, Ensel & Kuo, 1979 cited in Leavy, 1983, p.4). Authors agree that in order to more comprehensively understand the dynamic role of social support in psychology it is necessary to approach it as an "omnibus term" (Sarason et al, 1990; Leavy, 1983; Dunkel-Schelter, Bennet, 1990). House (1981, in Murphy, 1988, p.156) defines social support as:

"An interpersonal transaction involving one or more of the following: (a) emotional concern; (b) instrumental aid; (c) information; and (d) appraisal.

These components can exist alone or as part of a whole in an interpersonal relationship. House (1981, in Leavy, 1983) defines emotional support as a combination of caring, trust and empathy; instrumental support as manifest in practical and financial aid; informational support as providing information or skills helpful for finding solutions to problems and appraisal support as the feedback evaluation of personal performance. Chisolm et al (1990 cited in Esprey, 1996), suggest that in the event of a traumatic experience, the *perception of emotional support* is of greatest importance to the psychological health of the individual. The perception that others are available to provide emotional comfort or practical assistance in times of need appears to be particularly beneficial for mental health (Lepore, Evans and Schneider, 1991). Dunkel-Schetter and Bennet (1990) found that perceived support is more highly associated with health than is actual received support. However, perceived negative support could potentially counteract the benefits of positive support relationships (Sarason et al, 1990). Thus literature suggests that a differentiation be made between perceived and actual received support as the subjective experience of social support is of most importance(Sarason et al, 1990; Sandler and Barrera, 1984).

It is empirically unclear what the exact role of social support in an individual's experience of stress symptoms is (Joseph, Andrews, Williams and Yule, 1992; Flannery, 1990) although intuitively it is assumed that social support does act as a buffer in times of extreme stress (Leavy, 1983; Sarason et al, 1990). Barrera (1984) suggests that support protects people from the damaging effects of stress and certain research has shown that the availability and use of naturally occurring social supports are generally associated with lower levels of psychopathology (Fullerton & Ursano, in press; Green, Grace & Gleser, 1985; Turner, 1981 in Ursano, Grieger and McCarroll, 1996). Studies have also shown that there is an association between social support and specific aspects of human physiology and health (Flannery, 1990) but, according to Flannery (1990), very few studies have specifically focused on the relationship between social support and trauma. However, in the previous study by Durrant (1997) it was found that perceived social support does play a moderating role in the degree of risk to compassion fatigue and thus this study will investigate if this is invariant.

8.1.1 Training and Supervision

Rosenbloom, Pratt & Pearlman (1995) emphasise the importance of adequate training and supervision (individual and small group) for every individual doing clinical work in hospitals and clinics. They suggest that not only is it important to ensure that supervision is available but that supervision fosters an atmosphere of respect, safety, and control for the caregiver who will be exploring the difficult issues evoked by trauma. Respect can allow for maintenance of self-esteem and a sense of safety while the caregiver examines mistakes or painful countertransference issues (Rosenbloom, Pratt & Pearlman, 1995).

McCammon (1995, p.118) states "In training of medical professionals we address not only their technical skills but also their knowledge of the potential impact of their work, how to engage in self-care, and how to establish supportive interventions and systems". By teaching about trauma, coping and resiliency we can promote "a heightened sensitivity and enhanced empathy for the suffering of victims, resulting in a deeper sense of connection with others.....a deep sense of hopefulness about the capacity of human beings to endure, overcome, and even transform their traumatic experiences; and a more realistic view of the world, through the integration of the dark sides of humanity with healing images" (McCann & Pearlman, 1990,

p.147).

8.1.2 Professional Peer Groups

One of the primary sources of support for therapists is the professional peer group which has the power to dilute the impact of secondary traumatic stress, to normalize the disturbing reactions and to help the therapist maintain the therapeutic connection with clients despite his or her personal upheaval. On the other hand, the peer group also has the power to make the situation considerably worse (Catherall, 1995).

Catherall (1995) maintains that social support provided by professional peers may be available to a limited degree through casual contacts but that it is best obtained within the context of a professional group with some degree of explicit formal organisation. The group can be modelled on the support obtained within a family. The usefulness of family support in the management of general stress has been widely demonstrated (Cobb, 1976; Dean & Lin, 1977; Hirsch, 1980; Solomon et al., 1987) and includes emotional support, encouragement, advice, companionship and tangible aid (Burge & Figley, 1982; Figley, 1983, cited in Catherall, 1995). Thus professional peers can be supportive by providing resources. They can help the secondarily traumatized therapist clarify his/her insights by listening carefully and non-judgmentally and correcting distortions in the therapist's assessment of his/her behaviour and responsibility in regard to the disturbing case. The perspective offered often constitutes a reframing of the trauma. Ochberg (1991 cited in Catherall, 1995) identified three underlying principles that are important to remember for effective support. These refer to : 1)individuality; 2) normalization; and 3)empowerment. According to this -

1. Each individual has a *unique* pathway to recovery after traumatic stress which needs to be respected.
2. There is a general pattern of post traumatic adjustment. Disturbing thoughts and feelings are *normal*.
3. The empowering principle emphasises the need for people affected by traumatic stress to be included as active agents in their own recovery so that they can recover their dignity and sense of power and control.

Intense emotions precipitated by traumatization and experienced empathically in secondary traumatization can be very disruptive in groups. When a peer has been traumatized by his or her work it is inevitably disturbing to his or her professional peers in that it is a reminder of their own vulnerability. One way to defend against this experience of vulnerability is to view the event as something peculiar to the particular therapist involved, rather than to the work itself. The traumatized therapist is then viewed as not functioning well because of something *being wrong* with him/her rather than something *having happened* to him/her (Jaques, 1955 cited in Catherall, 1995). When this defensive view is believed by several of a group it acquires power, gains prominence within the group and the traumatised individual is left feeling alienated, vulnerable and personally damaged. This social cutoff then constitutes an additional trauma, a relational trauma, which exacerbates the original stress response (Catherall, 1989; Symonds, 1980 cited in Catherall, 1995). When a peer group is formally organized victim blaming can be prevented by being discussed and anticipated before it occurs. The group leaders can help discourage the process of ostracism by defining and approaching the issue as a group problem, not an individual problem. It is recommended that the group have rules in place that serve to protect groups during periods of crisis, for example confidentiality, the participation of all group members which contributes to cohesion of the overall group. Psychoeducational information should not be delivered to the group in a dry, lecture format but in a way that enables the group to discuss and react to the material so that it comes alive and becomes "part of the group's personal history and culture" (Catherall, 1995, p.90). The risk of compassion fatigue is lessened if the therapist has an appropriate forum in which to share reactions and receive support (Catherall, 1995).

8.1.3 Debriefing

Literature (Robinson & Mitchell, 1993; Armstrong) also indicates the positive impact and value of debriefing as a therapeutic intervention when trauma has impacted on a person. It appears that part of the debriefer's task is to give the person an opportunity to express and release emotions, provide containment and empathy, help the person to come to terms with the experience and make sense of the experience (Talbot et al., 1992).

8.1.4 "Making a Difference"

The fact that a caregiver has a sense of "**making a difference**" to the life of a victim seems to be what Figley (personal communication, Sept. 1997)calls the " active ingredient" which appears to lessen the impact of secondary traumatization (compassion fatigue). Figley (1997, personal communication) states that he

> *"started the 'active ingredient' project as a result of discovering that therapists who use methods that (a) result in rapid change in the client (b) are client-centred and (c) are empowering for the client (increase their sense of competence and independence) were more resistant to compassion fatigue - though the compassion stress seemed to be the same (i.e. stressful material generated by the client in the session)".*

Many caregivers report job satisfaction because they consider their work meaningful (Yaasen, 1995) and goal achievement in treatment, in contrast to a void of achievement which can be a symptom in the process of burnout (Pines and Maslach, 1981), is associated with feelings of strength (Valent, 1995). In Figley's model of compassion stress (p. 102) he states that a "sense of achievement" (in the effort to relieve suffering) is an important variable (which interacts with others), since, the extent to which the helper is satisfied with his/her efforts (sense of achievement), and the extent to which the helper can distance his/herself from the ongoing misery of the victim(s) accounts for how much the helper experiences compassion stress. In STSD (compassion fatigue) there is a sense of helplessness. Helpers may themselves be overwhelmed and despair of being able to help (Valent, 1995). This can frequently l observed when devastation is great and traumatic bereavements have occurred (Valent, 1995). In addition, primary care providers are trained to provide rapid and efficient relief of the patient's symptoms and an inability to diagnose correctly and relieve the patient's symptoms can be a major work-related stressor for the primary caregiver (Bills, 1995). This may occur when a patient presents with a complex array of somatic symptoms which do not necessarily meet criteria for a specific medical or psychiatric diagnosis and yet the suffering is unmistakable. In cases such as these, a trauma-based approach may be helpful and, according to Bills (1995, p.123) "the most important thing you can do for these patients is to ask them questions about what has happened to them recently or in the past". This type of intervention can be what "makes a difference" to the patient and, in turn, gives the helper a "sense of making a difference".

9. Conclusion

As the field of trauma has grown it has become increasingly apparent that the effects of traumatic events go beyond the primary victim or those who have directly experienced them. The study of trauma has refocused the issue of the impact of reality on psychological, biological, and social systems and has firmly established that exposure to overwhelming experience is an undisputed etiological factor in many psychological problems (Fullerton et al, 1992c; Fullerton & Ursano, in press; Green, Grace & Gleser, 1985; Turner, 1981 in Ursano, Grieger and McCarroll, 1996). Researchers used to assume that stresses had cumulative effects, but did not take into account the fact that certain acute traumatic events were capable of breaking the human capacity to adapt appropriately (ibid.). Now it is known that there is a categorical difference between the impact of traumatic stressors and that of day-to-day life stressors. Literature (Figley,1995) is suggesting that in the process of empathizing (which is helpful for understanding a person's experience) with traumatized people secondary traumatization can occur. The literature reviewed suggests that, in addition to Post Traumatic Stress Disorder, there is Secondary Traumatic Stress Disorder (STSD - what Figley (1995) terms "compassion fatigue"). This is apparently characterised by fatigue, emotional strain and the risk of burnout and, according to the literature, **all** people in caring professions are at risk of this.

Compassion fatigue (STSD), it is suggested, can emerge suddenly with little warning. It incorporates feelings of helplessness, confusion and a sense of isolation from supporters, in contrast to burnout which emerges gradually and is the result of emotional exhaustion. In spite of the clear identification of this phenomenon as a form of traumatization in the DSM-IV, Figley (1995) states that little attention has been directed to those who care for people who have been traumatized. This was the major assertion that led to a study into the degree of risk for 3rd year physiotherapy students at the University of the Witwatersrand in 1997 (Durrant, 1997), the results of which confirmed the literature reviewed. The purpose of this current study is to ascertain if the 1997 results can be replicated as well as extended to a wider population of students in allied medial sciences within our South African context.

Because there is a complicated interrelationship between a developing person and the "world-

out-there" any phenomena cannot be studied without recognition of context. The South African social and political context in which this current study is undertaken is characterised by violence and trauma, with most South Africans being exposed on a daily basis to the traumatic experiences of others either through the media or social networks. Also, the present working conditions in South African state hospitals and clinics, where students in allied medical disciplines are trained, are themselves stressful as there is a general shortage of expertise, staff, funding, beds and equipment. In addition, the students who work in the trauma wards of hospitals often have little supervision and experience inadequate support although they are likely to see far more of the sequalae of trauma than other therapists, such as psychologists, who only later attend to patients. It is hypothesised that the degree of risk of secondary traumatization may already be higher for caregivers in South African because of this violent political and social context than it is for those in the United States of America, where most of the research has, to date, been conducted.

Professional caregivers, and those studying to be professional caregivers (in this study the 1997 and 1998 3rd year physiotherapy and occupational therapy students) confront trauma on a predictable although episodic basis (Ursano, Grieger and McCarroll, 1996). The literature reviewed suggests that current medical school training rarely provides trauma-related training to students and that while students may have varying degrees of experience and training they may lack specific training in trauma/disaster stress and countertransference reactions. Also, because most trauma workers have experienced some traumatic event in their own lives, there is the possibility that they are more vulnerable to compassion fatigue, especially if this was experienced during their childhood. Ursano, Grieger and McCarroll (1996, p.456) state that caregivers should be educated in the expected stressors of disasters and trauma and that it is important that they recognize cases in which traumatic stress may become chronic. There is sometimes an incorrect assumption that if a symptom is not biological it is simply in people's heads and thus they should "get over it" and "go on with their lives". McFarlane and van der Kolk (1996, p.560) stress that having caregivers who are able to grasp the impact of trauma on both their own lives as well as on their patients' and to respond appropriately can make the critical difference between recovering and succumbing of both patient and therapist. If there is an awareness of compassion fatigue being a normal, occupational hazard of caring service

providers, there does appear to be an obligation to students and trainees to prepare them for these hazards by incorporating trauma-related training as well as information on compassion fatigue, stress and burnout into their curriculum and into their supervision in practica, while simultaneously emphasizing the rewards of this type of work.

In addition, caregivers form an important link in the chain of social support that a patient receives while they themselves might or might not have a strong social support system and, it appears that the perception that others are available to provide emotional comfort, or practical assistance in times of need, is particularly beneficial for mental health. The literature (Horowitz, 1976; Figley, 1995) reviewed suggests that some people seem to cope better than others with serious life events because they find meaning in what seems meaningless, they handle the experience of powerlessness and very intense emotions or because they perceive that they "have made a difference". Although not a primary focus of this study, it is hypothesised that, if these assertions are valid, evidence of this will emerge during this present longitudinal research.

Literature asserts that training, adequate support from supervisors and appropriate debriefings can alter the experience of exposure, decrease surprise and the unexpected as well as maximize the sense of mastery and hope. Should the students in this study be found to be at risk of compassion fatigue as hypothesised, this study will give ideas for ameliorating the effects of working with victims of trauma. For, as T.S. Eliot wrote : "There is no life that is not in community". We are interdependent in our society - caregivers and victims and as Hudnall Stamm (1995, p.xi) also writes : "my experiences have shown me how communities, when well cared for, sustain their members during times of failed self-sufficiency". By caring for the caregivers, (in this case the students at the University of the Witwatersrand in the allied medical sciences of physiotherapy and occupational therapy), within our already traumatised South African society we can attempt to build strong sustaining communities.

CHAPTER 2

RATIONALE AND AIMS

1. RATIONALE

The literature reviewed suggests that all people in caring professions are at risk of compassion fatigue (secondary traumatic stress disorder/secondary traumatization) and that, in spite of the clear identification of this phenomenon as a form of traumatization in the DSM-IV, little attention has been directed to those who care for people who have been traumatized (Figley, 1995). Literature (Figley, 1995) also suggests that if there is an awareness of compassion fatigue being an occupational hazard of caring service providers there appears to be an obligation to students and trainees to prepare them for these hazards. This can be done by incorporating stress, burnout and compassion fatigue literature into their curriculum, and into their supervision in practica, while simultaneously emphasizing the rewards of this type of work. This assertion was the motivation for the 1997 longitudinal study by Durrant (1997) which assessed the degree of risk of compassion fatigue for the 1997 3rd year physiotherapy class at the University of the Witwatersrand. It assessed whether these students, who were studying to be professional caregivers and who were treating traumatized patients in South African state hospitals and clinics, were at risk of compassion fatigue and if so, to what degree. It also investigated if there was a trend which indicated whether exposure to certain types of patients, specifically those who in being injured had experienced traumatic events, as opposed to those who were injured but not traumatically as defined by the DSM-IV, would alter the level of the degree of risk of compassion fatigue. Results obtained indicated that the students were at *high risk* even before treating patients and at *extremely high risk* after treating patients. There was a definite trend in the degree of risk. They were at a higher degree of risk after treating the "more traumatized" patients and at a lower degree of risk (although still within the extremely high risk range) when treating less "traumatized" patients.

The assertions in the literature review with regards to gaps in research within the field of trauma, specifically that traumatology has inadvertently ignored a large segment of traumatized

people - individuals traumatized as a result of their compassion for others, as well as the results of the 1997 longitudinal study, are the motivation for the current research which intends to attempt to replicate and extend the 1997 findings in order to see if there is homogeneity (Rosnow & Rosenthal, 1996) in the results and thus make a useful contribution to the field of trauma research as well as to the Allied Sciences of Physiotherapy and Occupational Therapy, specifically at the University of the Witwatersrand. If compassion stress (STS) and compassion fatigue (STSD) are found to be the natural, treatable and preventable consequences of trauma work, there does appear to be an obligation to prepare students for trauma work and specific recommendations can be suggested in order to keep the levels of risk for the students as low as possible.

2. AIMS

Results of the 1997 study showed that the 1997 3rd year physiotherapy students were at a high degree of risk for compassion fatigue even before having contact with patients and that this degree of risk rose into the *extremely high risk* range when they had contact with their patients during their different medical/community blocks. In light of this, the literature reviewed as well as the assertion that there is not a great deal of methodological research about compassion fatigue in the traumatology literature, the primary aim of the current research is to ascertain if the results of the 1997 longitudinal study which researched the degree of risk in 3rd year physiotherapy students can be replicated, as well as extended to a wider population of students within allied medical sciences, specifically to the 1998 3rd year physiotherapy as well as the 1998 3rd year occupational therapy students. It also aims to explore whether there is a difference between the degree of risk of compassion fatigue (STSD) between the two above disciplines.

This current study also aims to investigate if the 1997 trend, which indicated that exposure to certain types of patients increases the degree of risk of compassion fatigue in the caregivers, is replicated or not in the 1998 study. The 1997 study reflected a trend in the students' responses which indicated that exposure to certain types of patients, i.e. those in the Neurological, Medical/ Surgical and Orthopaedic Blocks, i.e. where the students were treating

more traumatically injured and inferentially more "traumatized" patients, contributed to this risk of compassion fatigue more than treating the patients in the Community block, the Out Patients Department or the Cerebral Palsy block, did. In the latter blocks it appears that the students generally treated patients who, although suffering, had not specifically experienced traumatic events.

In view of Figley's assertion that measures which measure social support are important because appraisal of the effects of traumatic events are significantly effected by the social relationship factor, the 1997 study also included a social support measure and, at a secondary level looked at the moderating influence of perceived social support. Results indicate that perceived social support appears to moderate the degree of risk. It was found that there was a negative correlation between the degree of risk of compassion fatigue and perceived social support. Thus the secondary aim of the current study is to investigate if there is an invariant negative correlation between perceived social support and the degree of risk of compassion fatigue.

CHAPTER 3

METHODOLOGY

3.1 Research Questions:

The primary research questions which promoted the current longitudinal study are the following:

1. What is the degree of risk for compassion fatigue (STSD) for 1997 and for 1998 3rd year University of the Witwatersrand Physiotherapy students as well as for 1998 3rd year Occupational Therapy students in their prolonged, intimate contact with patients?

2. Is there a difference between the degree of risk of compassion fatigue *between* the 1998 Physiotherapy students and the 1998 Occupational therapy students at the pre exposure and the post exposure to patients in their 3rd year?

3. Is there a trend within the groups in the different disciplines that indicates that exposure to certain types of patients (as specified by the different medical/community blocks which the students are required to attend) contributes to this degree of risk to a greater extent than do others?

4. Is the 1997 study of 3rd year physiotherapy students, with regard to risk of compassion fatigue and the trend within the groups, replicated by the 1998 study of 3rd year physiotherapy students?

5. Is there a correlation between perceived social support and the degree of risk of compassion fatigue?

3.2 Hypotheses:

H_1 : The Compassion Fatigue Self Test reflects that there is a degree of risk of Compassion Fatigue (STSD) for the 1997 and 1998 3rd year Physiotherapy as well as for the 1998 3rd year Occupational Therapy Students at the University of the Witwatersrand.

H_2 : The different groups responses reflect a difference in the degree of risk of Compassion Fatigue (STSD) between the 1998 Physiotherapy students and the 1998 Occupational Therapy students at pre and post exposure to patients in their 3rd year.

H_3 : The different groups responses reflect a trend that indicates that exposure to certain types of patients contributes to the degree of risk of Compassion Fatigue (STSD) more than other patients do.

H_4 : The 1998 longitudinal study about the degree of risk of compassion fatigue (STSD) in 3rd year Physiotherapy students is not significantly different from the 1997 longitudinal study of 3rd year Physiotherapy students.

H_5 : It is invariant that high levels of perceived social support on the Crisis Support Questionnaire (CSQ) reflect lower degrees of risk of Compassion Fatigue (STSD) i.e. that there is always a negative correlation between the scores for the degree of risk of compassion fatigue (STSD) and the scores for perceived social support on the CSQ.

3.3 Research Sample:

In order to answer the above research questions, a sample of 100 (86 women and 14 men, ages ranging from 19 to 32 years) 3rd year Physiotherapy students and 3rd year Occupational Therapy students was drawn from the University of the Witwatersrand. This sample was drawn over a two year period with **37** (28 women; 9 men) 3rd year Physiotherapy students from year **1997**; **42** (37 females; 5 males) 3rd year Physiotherapy students from year **1998** and **21** 3rd year Occupational Therapy students from year **1998**. The predominance of women can

be explained by the fact that, in South Africa, physiotherapy and occupational therapy have traditionally been women's careers. It was during their third year that these physiotherapy students were in prolonged, intimate contact with patients for the first time, while the occupational therapy students had, it transpired, already been in contact with patients during their 2nd year of study.

3.3.1 Nonprobability convenience sampling

Nonprobability convenience sampling was used. Both the Physiotherapy and Occupational Therapy Departments at the University of the Witwatersrand agreed to allow the researcher access to the 3rd year students, which was an expedient factor. Generalisability of the study's results is reduced because in nonprobability sampling the probability that any person from a specified population will be selected is not known (Esprey, 1996).

3.4 Procedure:

This longitudinal, non-experimental (no randomisation as the Departments allocated the students into the different groups as well as to the different blocks at specific times), time series intervention between individuals; within groups and between disciplines research design was of an exploratory nature.

After obtaining consent from the Heads of Departments, all the Physiotherapy and Occupational students were requested to participate in this research, to which they all agreed and signed letters of consent to that effect (Appendix 2, p. 102).

A questionnaire (see Appendix 2, p. 103-106), incorporating demographics, the Compassion Fatigue Test and the Crisis Support Questionnaire as well as open-ended questions, was completed by all students, both the 1997 and 1998 Physiotherapy students, *prior* to their going on their first block for the year. The 1998 3rd year Occupational Therapy students, although previously having been exposed to patients, completed the same questionnaire at approximately the same time as the physiotherapy students. The Compassion Fatigue Test differentiates between compassion fatigue and burnout which is necessary as caregivers, and in

this particular study the physiotherapy and occupational therapy students, are exposed to and treat both trauma survivors as well as other difficult populations. The separating out of these two concepts is, therefore, necessary in order not to confuse and confound the results.

This data, collected at the beginning of the year, forms the baseline of the research. The same questionnaire was then administered to every student at the end of each of their "blocks" (in all 7 times to each physiotherapy student), after the students had completed their specific block.

The blocks that the physiotherapy students attended, in groups of 6 or 7, are:
the **Orthopaedic (Ortho)** block at Baragwanath Hospital,
the **Neurological (Neuro)** block at either Johannesburg Hospital, Natalspruit Hospital or Boksburg Hospital,
the **Medical and Surgical (Med/Surg)** block at Baragwanath Hospital,
the **Out Patients Departments (OPD)** block at either Johannesburg Hospital, Wits Campus Health, Helen Joseph Hospital or Hillbrow Hospital,
the **Community (Com)** block at either Alexandra Clinic or Jordaan House (Old Age Home) and the **Cerebral Palsy (CP)** block at either Baragwanath Hospital, Forest Town School, Frances Voorweg School or Westrand School (see Table 2, p.35).

The occupational therapy students attended clinical practical blocks at Tara, Johannesburg Hospital and Baragwanath Hospital and their community block at St. Rita's in the Northern Province.

The Physiotherapy students (n=37 in 1997 and n= 42 in 1998), attended six different blocks during the year, whilst the 1998 Occupational Therapy students (n=21) only attended four different blocks during 1998. The questionnaire was issued to every student from each group of students after each block and was thus administered 18 times in all. Confidentiality was attained by each student filling in the last three numbers and letter of their student card. The response rate for 1997 was consistently good while the 1998 response rate was less consistent as can be seen from the table below:

TABLE 1 :Response rate was as follows:

RESPONSE RATE

Physio 1997

Test Name	Pre CF	CF 1	CF 2	CF 3	CF 4	CF 5	CF 6
Date	26/02	03/03-28/03	21/04-16/05	19/05-13/06	21/07-15/08	18/08-12/09	22/09-17/10
Responses	37	37	37	37	36	37	37

Physio 1998

Test Name	Pre CF	CF 1	CF 2	CF 3	CF 4	CF 5	CF 6
Date	25/02	09/03-03/04	27/04-22/05	25/05-19/06	03/08-28/08	31/08-25/09	28/09-23/10
Responses	42	41	41	32	35	36	32

OT 1998

Test Name	CF 1	CF 2	CF 3	CF 4
Date	10/3	11/03-03/06	04/06-09/09	10/09-29/10
Responses	21	17	21	20

All the students were assigned, by the Departments, into groups and each group was assigned to do practical work at a specific time at a specific medical/community block:

TABLE 2 : 1997 and 1998 Physiotherapy students - Clinical Experience (T1=CF1=time period of each block - see response rate above)

Physio 1997

Group	T1	T2	T3	T4	T5	T6
1 - 7students (6 female, 1 male)	Ortho	OPD	Neuro	CP	Med/Surg	Com
2 - 6 students (2 female, 4 male)	Com	Ortho	OPD	Neuro	CP	Med/Surg
3 - 6 students (5 female, 1 male)	Med/Surg	Com	Ortho	OPD	Neuro	CP
4 - 6 students (4 female, 2 male)	CP	Med/Surg	Com	Ortho	OPD	Neuro
5 - 6 students (6 female)	Neuro	CP	Med/Surg	Com	Ortho	OPD
6 - 6 students (5 female, 1 male)	OPD	Neuro	CP	Med/Surg	Com	Ortho

Physio 1998

Group	T1	T2	T3	T4	T5	T6
1 - 7students (6 female, 1 male)	Ortho	OPD	Neuro	CP	Med/Surg	Com
2 - 7students (6 female, 1male)	Com	Ortho	OPD	Neuro	CP	Med/Surg
3 - 7 students (6 female, 1 male)	Med/Surg	Com	Ortho	OPD	Neuro	CP
4 - 7 students (6 female, 1 male)	CP	Med/Surg	Com	Ortho	OPD	Neuro
5 - 7 students (7 female)	Neuro	CP	Med/Surg	Com	Ortho	OPD
6 - 7 students (6 female, 1 male)	OPD	Neuro	CP	Med/Surg	Com	Ortho

1998 3rd year Occupational Therapy students - Clinical Experience

These students, in groups of five or six, attended various Psychiatric, Community, Medical and Surgery as well as Occupational Therapy Blocks for varying periods of time throughout the year. They were not allocated to specific blocks as were the physiotherapy students but treated patients on an ad hoc basis and thus it was impractical to try to ascertain if there was a trend in their degree of risk in response to exposure to certain types of patients.

3.5 Measuring Instruments:

In a longitudinal study it is necessary for the researcher to be sensitive to the time it takes to fill in a questionnaire and, as this questionnaire needed to be administered seven times to each physiotherapy student and four times to each occupational therapy student during each respective year, it was essential for the scales not to be too lengthy. In addition to the demographic information (age, gender, marital status), two scales were used in the questionnaire as well as some open ended questions concerning the nature of the individual blocks and the students' subjective experiences of these blocks.

The measuring instrument chosen by this study to assess levels of Compassion Fatigue is Figley's (1993a) Compassion Fatigue Self Test (Items 1 - 30) (CFS) (see Appendix 2, p.104). The instrument chosen to assess levels of social support in this study is Joseph et al's (1992) Crisis Support Questionnaire (CSQ), which has been amended by Esprey (1996) to also incorporate questions about support resources (see Appendix 2, 105).

3.5.1. The Compassion Fatigue Test (CFS):

The Compassion Fatigue Test (Figley, 1993a) is under development. The scale was designed to help differentiate between burnout and Secondary Traumatic Stress. The CFS is a self-report instrument with 30 items, each requiring the respondent to answer on a 5-point scale, ranging from *rarely/never* to *very often*. The higher the rating obtained, the greater the level of risk of Compassion Fatigue. A score is obtained by summing items 1-8, 10-13, 17-26, and 29 although a response to all 30 items is requested - 26 or less denoted *extremely low risk*; 27 - 30 *low risk*; 31 - 35 *moderate risk*; 36 - 40 *high risk*; 41 or more *extremely high risk*.

The psychometric properties of the scale are reported by Stamm and Vara (1993). Alpha reliability scores range from .94 to .86; structural analysis yielded at least one stable factor which is characterised by depressed mood in relationship to work accompanied by feelings of fatigue, disillusionment, and worthlessness. Structural reliability (stability) of this factor, as indicated by Tucker's Coefficient of Congruence (cc) is .91 (Figley, 1995, p.14).

The CFS, which is time efficient, was the only scale in 1997, as far as the researcher was aware, available to measure the degree of risk to Compassion Fatigue (STSD) and thus it was used in this study. It was necessary, for replication, to continue using this scale in 1998.

3.5.2 **The Crisis Support Questionnaire (CSQ):**

The Crisis Support Questionnaire (Joseph et al, 1992) was developed from the Crisis Support Instrument (Andrews and Brown, 1988; Brown et al, 1986) which is a semi-structured interview employing investigator-based ratings. The questionnaire assesses support perceived to be available to an individual following a traumatic event. As stated the CSQ has been amended by Esprey (1996) to incorporate who provides the different aspects of support e.g. "Whenever you wanted to talk, how often was there someone willing to listen? **Who was willing to listen?**"(see Appendix 2, p.105).

The CSQ is a self-report instrument with 7 items, each requiring the respondent to answer on a 4-point scale, ranging from never to always. The higher the rating obtained, the greater the level of support. A total score is obtained by summing all item scores - a minimum score of 7 and a maximum score of 28.

It is a fairly new instrument which has not, as yet, been used in many studies. The following psychometric details are available from 3 studies (Esprey, 1996; Joseph, 1992; Joseph et al, 1991) in which the CSQ was used to assess social support. Internal consistencies were found to be moderate: Cronbach's alpha (Esprey, 1996); = .67 and .69 (Joseph, 1992) and = .80 (Joseph et al, 1991). There was a strong correlation obtained for scores taken over a time period of 3 months: $r = .54$ ($p < .01$); $r = .85$ ($p < .001$).

It was decided to use the CSQ as it is short, a pertinent factor, and as it would assist in assessing whether students reflecting high levels of perceived social support show less risk of Compassion Fatigue (STSD) than do those with low levels of perceived social support.

It must be noted that the concepts studied in the current research, i.e. compassion fatigue and social support, are so complex that a single approach cannot really encompass this complexity. Also, that in the reduction of narrative to a quantifiable number, the complexity of a response to a life experience is lost (Mouton & Marais, 1993). In light of these factors, this study also included open-ended questions in the questionnaire administered to the students.

3.6 Statistical procedures:

The research questions posed in this study are on a micro-level. The units of analysis are the individual students as well as the different groups and the different disciplines, i.e. a within subjects, within group as well as between groups design. The design is based on an interrupted time series design in which the effects of a "block"/type of patient are inferred from a comparison of the outcome measures obtained at different time intervals before and after the students, in their groups, attend a medical/community block (Rosnow & Rosenthal, 1996). This data is called a time series because there is a single data point for each point in time, and it is called an interrupted time series because there is a clear dividing line at the beginning of the intervention (the treatment of patients in clinical blocks), which makes the time points sensitive to the particular effects of interest i.e. the effects of the different types of patients (ibid.). The completion of the questionnaire *before* the 1997 and 1998 physiotherapy students and 1998 occupational therapy students attended any medical/community blocks in each respective year has been applied as a baseline. When the observations after each block are compared with these baseline observations, as well as with the observations taken at the end of each block, each subject/group serves as its own control (ibid.).

In the Results there is a presentation of descriptive statistics, such as means, frequencies and standard deviations which represents salient features of the data, followed by exploration of the five hypotheses using the statistical procedures of repeated measures, t-tests, paired t-tests,

and partial correlations.

3.6.1 **Repeated measures**

In repeated measures the same subjects respond on two or more occasions. In this study the means of all the students initially prior to going on blocks and then after each block were studied to ascertain if there was a risk of compassion fatigue (STSD) . The means of the 1997 and 1998 physiotherapy groups were compared initially with the pretest (baseline) and subsequently with the means recorded at the end of each block, in order to ascertain if there is a trend that indicates that the type of patient the students see has any effect on them. In this study the physiotherapy students were asked to respond on 7 occasions and the occupational therapy students on 4 occasions.

3.6.2 **T-tests**

T-tests and paired t-tests can be used to compare the means of two groups. T-tests were used to compare the different groups'/disciplines' means over time. In this study a t-test was performed to show the difference between the two means of the different medical disciplines at pre and at post exposure, i.e. the means of the Physiotherapy students and the Occupational Therapy students at the first data collection in 1998 as well as at the final data collection in 1998 were compared.

3.6.4 **Partial correlations**

Partial correlations describe the relationship between two variables, whilst adjusting for the effects of one or more additional variables (Esprey, 1996) and were used in this study to assist in assessing if there is a relation between social support and the risk of compassion fatigue (STSD) and, specifically, if there is an indication of a negative correlation i.e. the higher the social support the lower the risk of compassion fatigue (STSD).

CHAPTER 4

RESULTS

4.1 Demographics

Pie charts overleaf graphically indicate the proportion of students according to age.

The age range for the 1997 physiotherapy {**Physio (1997)**} sample (n=37) was between 19 and 33 years with 91% falling between the ages of 19 and 25 years and 78% falling between the ages of 19 and 22 years. **Mean = 21.72 (S.D. 2.51)**

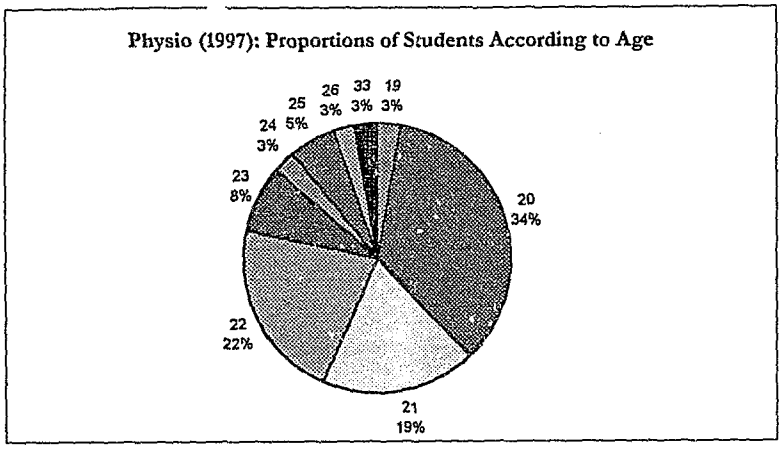
The 1998 physiotherapy {**Physio (1998)**} sample (n=42) was between 19 and 25 years with 83% of the subjects falling between the ages of 19 and 22 years. **Mean = 20.97 (S.D. 1.65)**

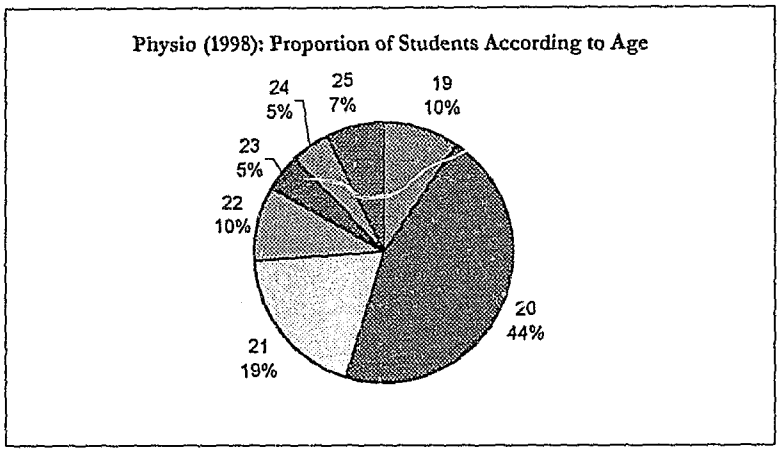
The age range for the 1998 occupational therapy {**OT (1998)**} sample (n=21) was between 20 and 23 years. **Mean = 20.62 (S.D. 0.82)**

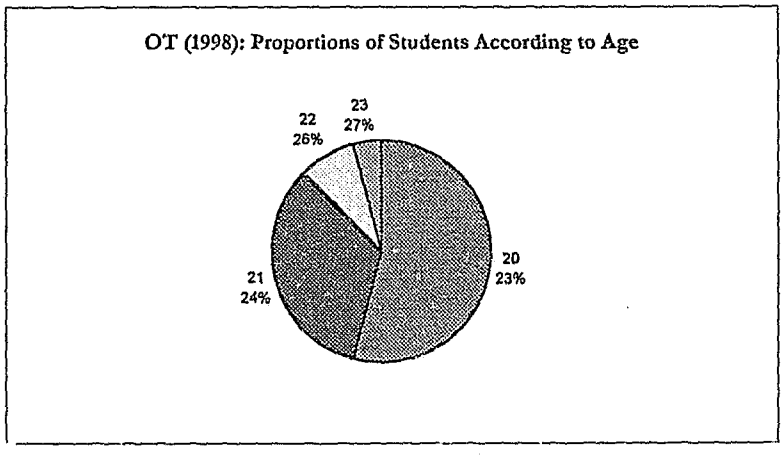
76% of the subjects of the 1997 {**Physio (1997)**}sample were female, and 24% male.
88% of the subjects of 1998 physiotherapy {**Physio (1998)**}sample were female, 12% male.
100% of the 1998 occupational therapy {**OT (1998)**}sample were female.

In the 1997 physiotherapy sample {**Physio (1997)**} 36 students were single, and 1 was married, while in the 1998 physiotherapy sample {**Physio (1998)**} 41 students were single and 1 was married. No occupational therapy students in the sample {**OT (1998)**} were married.

TABLE 3 : Pie charts indicating the proportion of students according to age:







4.2 Hypothesis 1

The Compassion Fatigue Test, which assesses the degree of risk of compassion fatigue, was completed overall by 90% of the students -

1997 physiotherapy {**Physio (1997)**} students 99,6%
1998 physiotherapy {**Physio (1998)**}students 88,10%
1998 occupational therapy {**OT (1998)**} students 79%.

Table 4 reflects the means (averages) and Standard Deviations of repeated measures of CFS scores for:

> **all** 1997 physiotherapy students **(Physio 1997)**over the longitudinal study, 24th February, 1997 - 17th October, 1997 (**T1, T2** etc, refer to block time eg. **T1** = 03/03/97 - 28/03/97; **T2** = 21/04/97 -16/05/97; **T3** = 19/05/97 - 13/06/97; **T4** = 21/07/97 - 15/08/97; **T5** = 18/08/97-12/09/97; **T6** = 22/09/97 - 17/10/97; see p. 35)
>
> **all** 1998 physiotherapy students **(Physio 1998)**over the longitudinal study 3rd March, 1998 - 21st October, 1998 (**T1** = 09/03/98 - 03/04/98; **T2** = 27/04/98 - 22/05/98; **T3** = 25/05/98 - 19/06/98; **T4** = 03/08/98 - 28/08/98; **T5** = 31/08/98 - 25/09/98; **T6** = 28/09/98 - 23/10/98; see p. 35)
>
> **all** 1998 occupational therapy students **(O.T. 1998)** over the longitudinal study 10th March, 1998 - 28th October, 1998 (**T1** = 23/02/98 - 09/04/98; **T2** = 20/04/98 - 03/07/98 03/07/98; **T3** = 27/07/98 - 11/09/98; **T4** = 21/09/98 - 05/11/98; see p.35).

TABLE 4:

Scores of 26 or less denote extremely low risk to Compassion Fatigue; 27 - 30 low risk; 31 - 35 moderate risk; 36 - 40 high risk; 41 or more extremely high risk.

Physio 1997

	Pre-Te	T1	T2	T3	T4	T5	T6
Mean	38.702	41.243	43.864	45.54	41.864	42.222	43.621
S.D	6.810	11.987	11.757	14.070	12.184	12.097	13.806

Physio 1998

	Pre-Te	T1	T2	T3	T4	T5	T6
Mean	33.048	39.146	39	35.656	37.457	36.361	35.125
S.D	6.771	10.894	11.783	8.071	13.012	10.781	13.163

O.T. 1998

	T1	T2	T3	T4
Mean	38.476	36.882	36.048	38.450
S.D	6.867	6.981	6.903	8.787

As can be seen in the table :

Physio 1997 sample were at **high risk** (mean **38.702**/ S.D. 6.81) before attending blocks and treating patients and at **extremely high risk** in T1, T2, T3, T4, T5 and T6 (all means over 41).

Physio 1998 sample were at **moderate risk** (mean **33.048** /S.D.6.77) before attending blocks and treating patients and at **high risk** (mean between 36 - 40) in T1,T2,T4,T5 and just below high risk in T3 and T6..

O.T. 1998 sample were at **high risk** throughout the year.

These Physio 1997, Physio 1998 and OT 98 results are presented graphically overleaf :

Physio 1997 & 1998: Average CF Test Scores according to Time

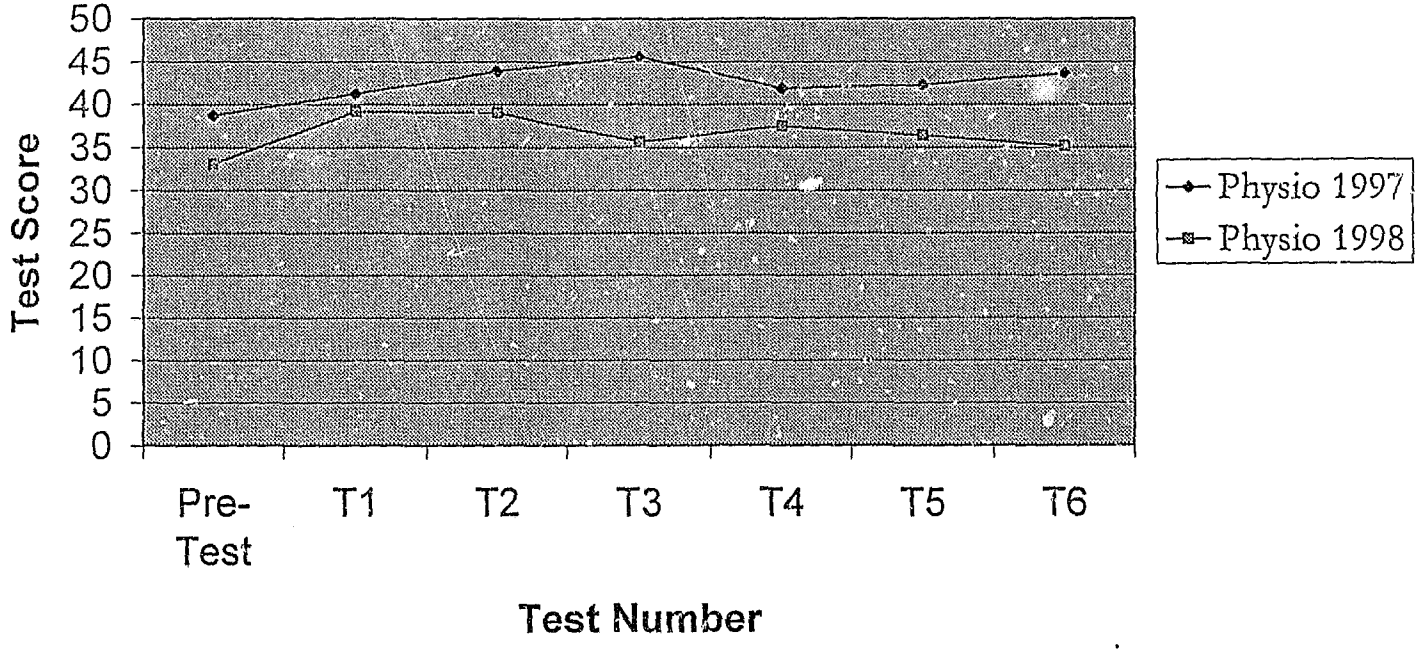


FIGURE 4:

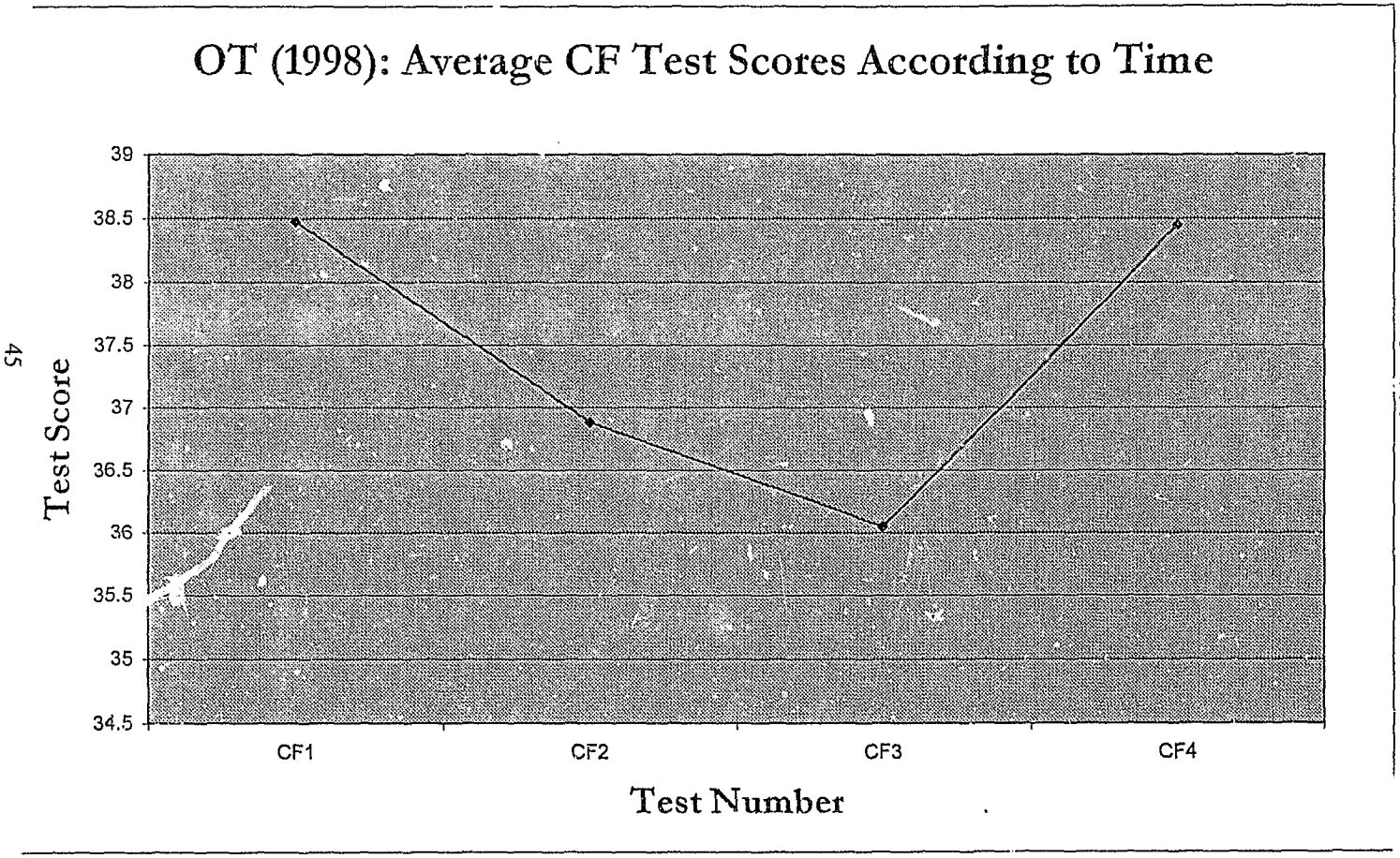

OT (1998): Average CF Test Scores According to Time
Test Score
39
38.5
38
37.5
37
36.5
36
35.5
35
34.5
CF1
CF2
CF3
CF4
Test Number

FIGURE 5 :

Hypothesis H1 addresses the general degree of risk of compassion fatigue in 3rd year Physiotherapy students and 3rd year Occupational Therapy students.

The results reflected in Table 4 indicate that the 1997 physiotherapy students, except for the pretest, i.e. prior to seeing patients, were at an *extremely high risk* to Compassion Fatigue (STSD) for the entire year. Even before the students saw their first patients they were at a *high risk* of Compassion Fatigue (STSD), namely, Pre-Te= 38.702 (S.D.6.810) but once they were exposed to patients these means rose into the extremely high degree of risk range, namely T1=41.243 (S.D.11.987). T2= 43,864 (S.D.11.757), T3=45.54 (S.D.14.070), T4=41.864 (S.D. 12.184), T5=42.222 (S.D.12.097) and T6=43.621 (S.D.13.806).

The 1998 physiotherapy students means indicate that at the pretest (prior to seeing their first patients) they fell with in the moderate risk range of Compassion Fatigue (STSD), namely Pre-Te=33.048 (S.D.6.771), but that their means rose to fall within the high risk range once they were exposed to patients, namely T1=39.146 (S.D.10.894), T2=39 (S.D. 11.783), T4=37.457 (S.D.13.012) and T5=36.361 (S.D.10.781). During T3 and T6, when only 32 of the 42 students completed the questionnaires, the means fell to slightly below the high risk range, namely T3=35.656 (S.D. 8.071) and T6=35.125 (S.D. 13.163).

The 1998 occupational therapy students were continually at a high degree of risk of Compassion Fatigue (STSD), namely T1=38.476 (S.D. 6.867), T2=36.882 (S.D.6.981), T3=36.048 (S.D. 6.903), T4=38.450 (S.D.8.787).

From the results obtained, it can be stated that there is a high degree of risk of compassion fatigue (STSD) for the 1997 and 1998 3rd year physiotherapy students as well as the 1998 3rd year occupational therapy students at the University of the Witwatersrand after exposure to patients. These results seem to support the literature assertion that being exposed to another's traumatic material has the potential of producing traumatic stress in the caregiver.

Hypothesis 1 can therefore be accepted and the conclusion drawn that there is a degree of risk of Compassion Fatigue (STSD) for the 1997 and 1998 physiotherapy students as well as the

1998 occupational therapy students. The degree of risk ranges between a *high* degree of risk and an *extremely high* degree of risk of Compassion Fatigue for 3rd year Physiotherapy and 3rd year Occupational Therapy students. Results support the literature : Caregivers are at risk of developing symptoms of Compassion Fatigue, which is identical to secondary traumatic stress Disorder (STSD), and is the equivalent of Post Traumatic Stress Disorder.

4.3 Hypothesis 2

The different groups responses reflect a difference in the degree of risk of Compassion Fatigue (STSD) between the 1998 physiotherapy students and the 1998 occupational therapy students at pre and post exposure to patients in their 3rd year.

The following Table 5, and graph (Figure 6 overleaf), reflect results of a two sample t-test which compares the average test scores obtained from the 98 physios and 98 OTs at the beginning of the year (February/March, 1998) and at the end of the year (October, 1998):

TABLE 5:

Two-Sample T-Tests (Physio 98 vs OT 98)

Test	Score
Pre CF (Physio) vs CF1 (OT)	0.004068
CF8 (Physio) vs CF4 (OT)	0.323355

Average Test Scores for Physio (1998) and OT (1998) at the Beginning and End of the Year

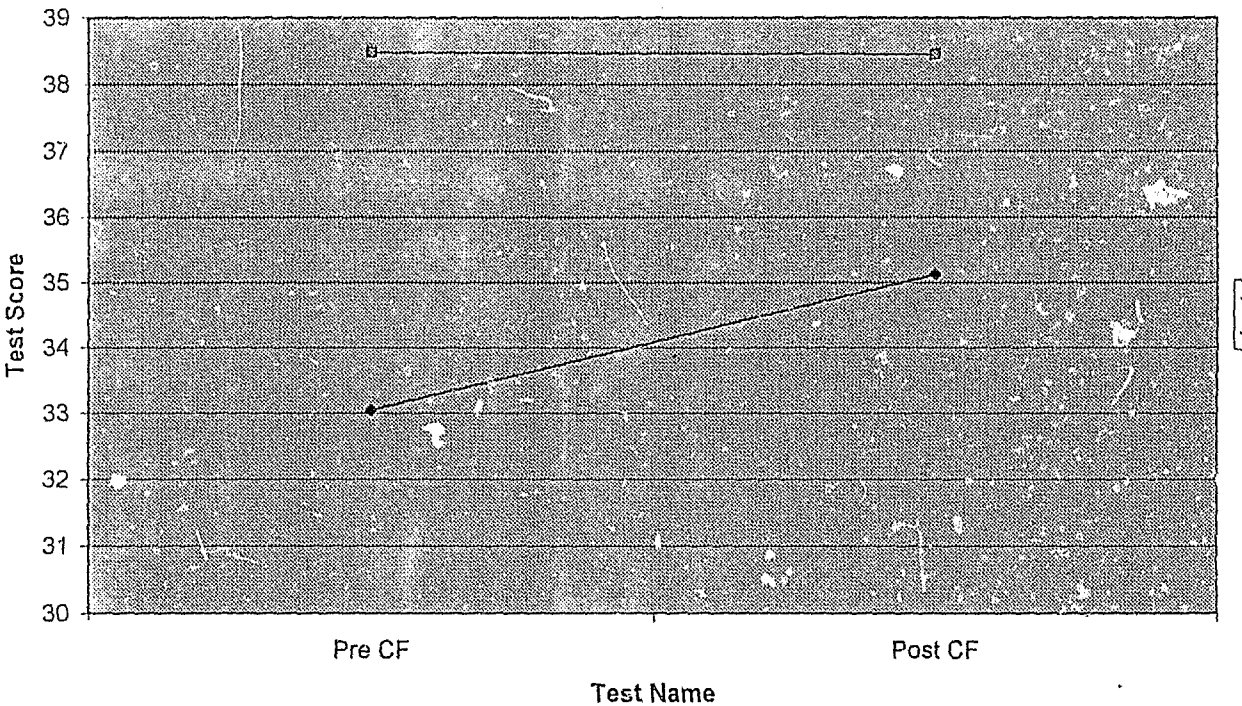


FIGURE 6:

Results indicate that there is a significant difference in the degree of risk of Compassion Fatigue (STSD) between 1998 physiotherapy students and 1998 occupational therapy students at the beginning of the year 1998 but not at the end of the year 1998.

However, it must be noted that the OTs were exposed to, and treated patients, in their 2nd year. This was not the case for the physiotherapy students. They have their initial, intimate contact with patients only in their 3rd year. If comparing the two groups after they have **both** been exposed to patients at T1 (**T1** (30/03/98) Physio 1998 means = **39.146 (high risk)** and at **T1** (11/03/98) OT 1998 means =**38.476 (high risk)** both fall within the high risk range and there is no difference (calculated at the 0.05 level of significance).

At **Pre-Te** (03/03/98) **Physio 1998** means = **33.048 (moderate risk)**
at **T1** (30/03/98) **Physio 1998** means = **39.146 (high risk)**
at **T1** (11/03/98) **OT 1998** means =**38.476 (high risk)**

If comparing both Physio 98 and OT 98 at T1 (very similar in terms of time of the year), when both have treated patients, there is no significant difference. Both groups are at high risk of compassion fatigue.

At **T6** (21/10/98) Physio 1998 means = **35.125 (moderate risk** - 36 - 40 = high risk)
at **T4** (28/10/98) OT 1998 means = **38.450 (high risk)**. However, even though the physio 1998 means are in the moderate risk range and the OT 1998 fall in the high risk range there is **no significant difference** (at the 0.05 level of significance) between the two as reflected in Table 4, p.43.

(It is interesting to note that there is also no significant difference between the Physio 97 and the O.T. 98 groups results at these same time (Physio 97 Pre-Te 38.702 *high risk* {S.D. 6.810}; T6 43.621 extremely high risk {S.D. 13.806} and O.T. 98 T1 38.476 *high risk* {S.D. 6.867}; T4 38.450 high risk {S.D. 8.787}).

Hypothesis 2 cannot, therefore, cannot be fully accepted. The conclusion drawn is that although there is a difference in the degree of risk between the 1998 Physiotherapy and the 1998 Occupational Therapy students at the first data collection, Physios on the 03/03/98 and OTs on the 11/03/98, this is not a valid comparison as the OT's had already treated patients and thus the intervention of patients had already taken place for the OTs but not for the Physios. There is, however, no difference in the degree of risk of Compassion Fatigue (STSD) between the two groups if they are compared at T1 (after intervention i.e. both groups have treated patients) and also at post block experience i.e. T6 Physios (21/10/98) and T4 OTs (28/10/98).

Results also indicate that the occupational therapy students were at a generally higher degree of risk in 1998 than the 1998 physiotherapy students were. However, their (the OT's) risk was not as high as the 1997 physiotherapy students who fell within the extremely high risk range.

4.4 Hypothesis 3

Assuming that hypothesis 1 is accepted, Hypothesis 3 addresses whether there is a trend within the different groups of physiotherapy students that indicates that exposure to certain types of patients, as specified by the different medical/community blocks which the students attend, may contribute to this risk to a greater or lesser degree. It is difficult to suggest a trend for occupational therapy students as they see a variety of different patients in each block and have not been assigned to specific patients during specific blocks in the same way as the Physiotherapy students have.

The blocks that the physiotherapy students attend are:
the **Orthopaedic** (Ortho) block at Baragwanath,
the **Neurological** (Neuro) block at either Johannesburg Hospital, Natalspruit Hospital or Boksburg Hospital,
the **Medical and Surgical** (Med/Surg) block at Baragwanath Hospital,
the **Out Patients Departments** (OPD) block at either Johannesburg Hospital, Wits Campus Health, Helen Joseph Hospital or Hillbrow Hospital,
the **Community** (Com) block at either Alexandra Clinic or Jordaan House (Old Age Home) and the **Cerebral Palsy** (CP) block at either Baragwanath Hospital, Forest Town School, Frances Voorweg School or Westrand School.

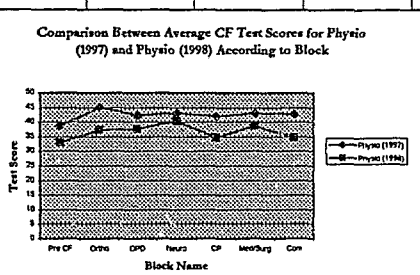
Patients in Ortho block, Neuro block and Med/Surg. block are in these specific blocks generally because they have experienced traumatic situations and have acute injuries. Patients in the OPD block, the CP block and the Com block, although experiencing some trauma and are suffering, are generally patients who have not experienced traumatic events as defined by the DSM-IV.

Results are reflected in Table 6 overleaf.

TABLE 6 :

CF: Two-Sample T-Tests (Physio97 vs Physio98)

Pre CF	Ortho	OPD	Neuro	CP	Med/Surg	Com
0.000410686	0.01306377	0.113918399	0.365070239	0.009553118	0.11716301	0.003641262



The graph is enlarged overleaf for clarity and compares the means of the 1997 physiotherapy students at each different block with the 1998 physiotherapy students at the same blocks.

The two sample t-tests (Physio 97 vs Physio 98) indicate that there is no significant difference between the 1997 and 1998 results for the Orthopaedic Block, the Out Patients Department, the Neurological Block or the Medical and Surgical Block. There is a significant difference in the pre exposure results as well as in the Cerebral Palsy Block and the Community Block.

In depth analysis of the results show that :

5 of the 6 groups' means in **1997 (83,33%)** and 4 of the 6 groups' means in **1998 (66,66%)** escalate when they attend the **Neurology Block,** i.e. there is a rise in the degree of risk of Compassion Fatigue in Neurology Block.

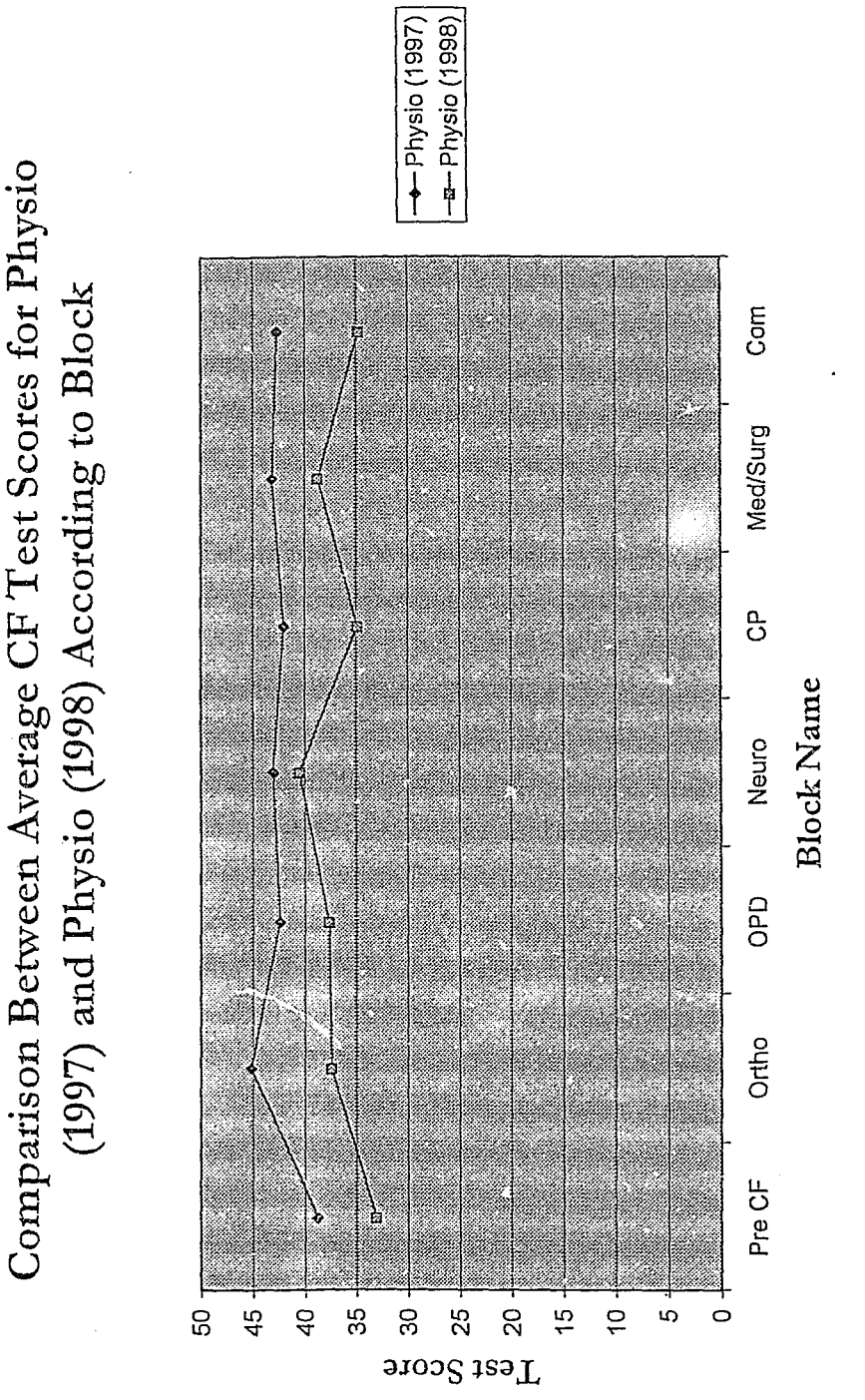
4 of the 6 groups' means in **1997 (66,66%)** and 5 of the 6 groups' means in **1998 (83,33%)** rise when they attend the **Medical and Surgical Block**, i.e. there is a rise in the degree of risk of Compassion Fatigue in Medical/Surgical Block.

4 of the 6 groups in **1997(66,66%)** and 5 of the 6 groups in **1998(83,33%)** escalate when attending the **Orthopaedic Blocks,** i.e. there is a rise in the degree of risk of Compassion Fatigue in Orthopaedics Block.

while only :

2 groups out of 6 **(33,33%) in both 1997 and 1998** groups rise for **both Cerebral Palsy**

FIGURE 7:


Comparison Between Average CF Test Scores for Physio (1997) and Physio (1998) According to Block
Physio (1997)
Physio (1998)
Test Score
50
45
40
35
30
25
20
15
10
5
0
Pre CF
Ortho
OPD
Neuro
CP
Med/Surg
Com
Block Name

Block and **Community Block**;
3 groups out of 6 **(50%) in both 1997 and 1998** rise for **Outpatients Department Block**.

In sum, means are generally **raised** for orthopaedic patients, neurological patients and medical and surgical patients; generally **lowered** for cerebral palsied patients and community patients while they are **variable** with out patients department patients.

Although there is a significant difference between the 1997 and 1998 results for CP and Com, as shown in the t-tests, it must be noted that they all indicate **lower** degrees of risk, i.e. the direction of the trend remains the same.

Results also indicate that the 1998 physiotherapy degree of risk for Compassion Fatigue is significantly lower in all these blocks than it is for the 1997 students.

Thus, although the degree of risk was not as high in the 1998 students as in the 1997 students, the trend shown in the results for both 1997 and 1998 is very similar. They both indicate that the degree of risk of compassion fatigue (STSD) rises when attending blocks where more "traumatised" patients are treated, i.e. Neuro, Med/Surg. and Ortho, and lowers when attending blocks where there are "less traumatised" patients, i.e. C.P. and Com. OPD is variable in both studies.

Hypothesis 3 postulates that the groups responses reflect a trend that indicates that exposure to certain types of patients contributes to the degree of risk more than exposure to other patients does. In light of the trend of raised degrees of risk for Compassion Fatigue (STSD) for the physiotherapy students when at their orthopaedic blocks (Ortho), their neurological blocks (Neuro) and their medical/surgical blocks (Med/surg) and the lowered degrees of risk of Compassion Fatigue (STSD) at the community blocks (Com)and cerebral palsied blocks (CP) with the variable degrees of risk at the out patients department blocks (OPD), hypothesis 3 can be accepted.

It supports the literature reviewed which states that one of the factors that primarily

contributes to Compassion Fatigue is the severity of exposure to stressors. It also confirms literature which states that a variety of types of events have been associated with the development of PTSD, and inferentially with STSD, i.e. "injury, violent or unexpected bereavement....exposure to grotesque death, hearing about the death of another person, life threat, rape and torture"(March, 1993; Green, 1990, 1993 cited in Green, 1994, p.354).

No trend could be found for the occupational therapy students owing to their not seeing specific patients in specific blocks.

4.5 Hypothesis 4

The 1998 longitudinal study investigating the degree of risk of compassion fatigue (STSD) in 3rd year Physiotherapy students is not significantly different from the 1997 longitudinal study of 3rd year Physiotherapy students.

Hypothesis 4 addresses whether the 1997 longitudinal study investigating the degree of risk of compassion fatigue (STSD) in 3rd year physiotherapy students is replicated by the 1998 study of 3rd year physiotherapy students, i.e. the 1998 study of 3rd year Physiotherapy students is not significantly different from the 1997 study of 3rd year Physiotherapy students.

Hypothesis 3, which postulates that the different groups responses reflect a trend that indicates that exposure to certain types of patients contributes to the degree of risk of Compassion Fatigue (STSD) more than exposure to other patients does, has been accepted. Results indicate that the general trend once students have been exposed to patients is very similar. However, the pretest means for degree of risk of compassion fatigue are significantly different, in that the 1997 physiotherapy group's means fall within the high risk range (38) and the 1998 physiotherapy groups' means fall within the moderate risk range (33). The results, therefore, indicate that the degree of risk for the 1997 group was greater than for the 1998 group, but that means are raised and lowered for the same blocks, i.e. raised for Ortho, Neuro and Med/Surg and lowered for Com and CP with variable degrees of risk for OPD. The general trend of raised risk for medical and surgical, neurological and orthopaedic blocks and

lowered risks for community, cerebral palsy and outpatients department is found in **both** studies.

Therefore, it is not possible to state that the results of the 1997 3rd year physiotherapy students study are totally replicated in the 1998 3rd year physiotherapy study, the degree of risk for 1997 was higher but the trend is similar.

4.6 Hypothesis 5

Hypothesis 5 addresses whether it is invariant that high levels of perceived social support on the Crisis Support Questionnaire (CSQ) reflect lower degrees of risk of Compassion Fatigue (STSD) i.e. that there is always a negative correlation between the scores of the degree of risk of compassion fatigue (STSD) and CSQ.

The overall results indicate that the means for social support as indicated by the CSQ are :
(min. score 7 - max.score 28)
Physio 97 Pre Te=18.297 (SD 2.59), T1=18.648 (SD 2.95), T2=18.864 (SD 2.79), T3=18.945 (SD 2.71), T4=18.648 (SD 2.54), T5=19.055 (SD 2.58), T6=18.459 (SD 2.64)
Correlation Coefficient CF (Compassion Fatigue) vs Ss (Social Support) Physio 97
Pre Te= -0.25452
T1 = -0.58069*
T2 = -0.44084*
T3 = -0.35117*
T4 = -0.480[illegible]5*
T5 = -0.60[illegible]9*
T6 = -0.3[illegible]69* (*significant calculated at 0.05 - sample size 37)

Physio 98 Pre Te= 18.214 (SD 3.03), T1=18.829 (SD 2.62), T2=19.439 (SD 2.82), T3=19.093 (SD 3.55), T4=19.371 (SD 3.23), T5=19.416 (SD 3.45), T6=19.5 (SD3.47)

Correlation Coefficient CF vs Ss Physio 98

Pre Te= -0.28319

T1 = -0.22021*

T2 = -0.11399*

T3 = -0.34247

T4 = -0.03767*

T5 = -0.30521

T6 = -0.46353 (*significant calculated at 0.05 - sample size 42)

OT 98 T1=18.904 (SD 4.62), T2=20.235 (SD 2.68), T3=20 (SD 3.06), T4=20.35 (SD 3.66)

Correlation Coefficient CF vs Ss OT 98

T1 = -0.35427*

T2 = -0.18204*

T3 = -0.10395*

T4 = -0.15898* (*significant calculated at 0.05 - sample size 21)

Results indicate that 100% of the students at the pretest perceived their social support as being over 18 (min.7/max 28) and at the posttest (T6)100% as being over 18. The overall results indicate that perceived social support for all students is generally consistent and good with low variability.

The 1997 study revealed a significant negative correlation between social support and degrees of risk of compassion fatigue, computed at the 0.05 level of significance, and the overall results indicated relatively high and consistent perceived social support with low variability. This is replicated by the 1998 occupational therapy students' results. The 1998 physiotherapy students' study, however, reveals that, although all are negative correlations, some of the correlations of the Compassion Fatigue Test against the Crisis Support Questionnaire, computed at the 0.05 level of significance, are not significant. Therefore the 1997 study with regard to perceived social support is not fully replicated in the 1998 study as it does not always appear to be invariant that high perceived social support is indicative of low risk of compassion

fatigue (STSD).

The results are variant at the 0,05 level of significance. In light of these results hypothesis 5, which states that it is invariant that students reporting high levels of perceived social support on the CSQ reflect lower degrees of risk of compassion fatigue, cannot be fully accepted.

4.7 Selected Responses to open-ended questions

4.7.1 Physiotherapy Students

1997 - **Orthopaedics**

"Patients with fractures due to trauma and accidents"

"I have begun to tolerate sights such as open wounds, operations and external fixators. Enjoyed working with patients since they were co-operative. I sometimes just think about what caused their condition e.g. gun shot and realise the ramifications of violence (for the first time)"

"My most challenging patient was shot twice.....it was challenging treating the consequences of both wounds as they were totally different. I have thoroughly enjoyed myself and am very excited for the rest of the blocks. I have felt a sense of accomplishment and "helpfulness" and enjoyed the fact that with my help my patients have improved enough to go home. Their smiles and thanks mean a lot."

1998 - **Orthopaedics**

"Mostly gunshot wounds and car accidents with fractures or dislocations"

"I can't believe the violence in this country and how many people that are hurt in the interim and how many victims as well as perpetrators we have to treat"

"All my patients except one were trauma patients with fractured limbs after an assault, MVA or PVA. I have enjoyed this block as I have felt effective but I find it frustrating working at Bara where a lot of the qualified staff are from other African countries and appear to have no work ethic"

"One patient, a 69 year old lady, who has been in since January and is immobilised in bed for now another 6 weeks. She is in constant pain all the time and is really miserable. She once said that it is time for her to die. I don't know what to do with her because she is in such pain that she can't do anything".

In sum, these responses reveal that, although treating very traumatized patients, these students do appear to feel effective and that they "made a difference" to their patients.

1997 - **Out Patients Department**

"Mostly patients who have stiff joints after accidents or violent attacks (e.g. knife injuries). It was a nice block in that it wasn't gory or disgusting and that everyone who came for treatment wanted it, no-one was forcing them to see you. They all were genuinely interest in getting better which makes my efforts easier"

"This has been my best block. I have really felt that I have achieved something by seeing how my patients have got better. It was very rewarding. I also felt that I have learnt a lot"

"It has been the most fascinating block, in that it is a culmination of everything you have learnt so far.....how grateful patients are with you when treatment has been beneficial in their lives and if they can see the improvements with each treatment".

1998 - **Out Patients Department**

"I mainly treat patients who have had surgery following an accident or trauma. I have found it has boosted my self-confidence in that most of my patients are getting better as a direct result of treatment. I did have one patient who jumped off a bridge in a suicide attempt. If found assessing him very difficult. I have another patient who suffers from chronic pain which affects his working, social, and more particularly, his family life. I cannot stand to see him suffer and there is nothing I can do as he needs his internal fixation surgically removed and that decision is up to the doctors"

In sum, these responses reveal that the students feel that they "made a difference" to these

trauma patients.

1997 - **Neurology**

"Stroke patients who have only one side of the body working"

"I have watched at least 5 patients in the ward die, and the expressions on their faces will stick in my mind forever"

"I have learnt a lot due to excellent supervision. It can be frustrating when patients can't talk or understand you. One of my patients died while I was in the room"

"Cva i.e. stroke patient - I had to be very patient and understanding but sometimes it is frustrating because you give so much and get no improvement. It has been mentally tiring but I would go through it again. I think I wasn't fully prepared for this block in terms of what to expect of patients - one patient passed away 3 weeks into the block. I couldn't help but feel a sense of loss"

"Patients are helpless, confused and often unable to communicate due to stroke. A patient died I disliked most of it as I was not prepared well and didn't know what was expected of me and what I should expect of my patients"

1998 - **Neurology**

"strokes, TB meningitis, head injuries, spinal TB, paraplegic - I found it quite emotional and exhausting. A lot of highs and then lows. I battled with seeing what people can be reduced to for the first time dreamt about my patients and their situations. At times the smells and sights got to me and I felt a bit depressed"

"I have felt a deep sense of fulfilment and achievement, but I feel that perhaps I have become too involved with my patients i.e. constantly think about them"

"My 15 year old Guillain-Barre patient was raped, probably predisposing her to her disease"

" the experience of treating one very ill patient with expressive and receptive aphasia, cardiomyopathy, extremely thin, terrible stench,

swollen orange tongue, blood in mouth and teeth who urinated everywhere has remained with me. Found her with blood pouring from nose and mouth, lying in her blood. No doctors/nurses seemed particularly concerned. I found myself not wanting to treat her at all - she gave me cold shivers"

In sum, there is not as much evidence in this block that the student therapists thought that they were "making a difference".

1997 -**Cereb .i Palsy**

"Children aged 3 - 13 with cerebral palsy or minimal neurological dysfunction - it has been a very positive enjoyable experience"

"It has been the best block so far - I thoroughly enjoyed it and I loved working with the kids"

"Cerebral Palsy - there was initially a problem with supervision, but this was resolved; while working with the children was sometimes disheartening, this was less so than with Neuro..... a family member was hijacked; there was illness of a family member and a period of quite severe depression occurring external to my work environment"

"C.P. - it's been absolutely great. I've loved every minute of it. Being in a happy, friendly environment has been wonderful.....my grandpa became extremely ill during this block".

"C.P. - I have really enjoyed this block. ..... I went to the UCPA and saw very severely disabled children. It was quite a shock..... broke up with boyfriend"

1998 -**Cerebral Palsy**

"CP children such as diplegics, quadraplegics, ataxic patients etc. I have really enjoyed this block, but have felt a bit frustrated at times; when I feel as if I don't know enough treatment techniques to be effective"

"I have loved working with children, it is hard sometimes when you realise you can't make them normal"

In sum, although affected by these children, generally the responses reveal that the students

enjoyed working with this population and that although these children suffer they have not generally experienced trauma.

1997 - **Medicine and Surgery**

"Patients with burns, stabs, gunshots, etc. - a lot of cases have been violence related.....I had dreams about burnt patients and hospitals.... another member of my group also dreamt about clinical experiences"

"There was a very young boy of 10 who was severely burnt and I had to stretch him until he screamed in agony"

"While I was treating my burn patient my supervisor told me that in order to gain results I have to hurt my patient. I knew this was for his own good but he was kicking and screaming and crying while she and I were treating him. He then tried to hit me"

"The ruthlessness of our society - seen some extremely distressing sights"

"It took me a while to get used to all the "trauma" that is occurring. I felt quite sickened by the realization that there seems to be such a disregard for human life in some communities"

1998 - **Medicine and Surgery**

"Laparotomy patients, amputees, lung absesses, pneumonia patients - I have not enjoyed this block although it is not physically demanding it is emotionally draining"

"At first it was a bit horrifying to see so much misery and trauma..... a burnt patient who should have gone to the burns unit to get appropriate care but is in a general ward and has been for over 2 months now. He is infected with various bacteria and is not getting better. Subsequently he is depressed. This angers me. Secondly, a patient of mine died due to inadequate care"

"One day I assessed this patient and the next day he died due to cardiac complications"

"One patient I had was an 86 year old lady. She had diarrhoea and was left to lie in it for 4 hours. She turned to me and I couldn't help her.

The day before that I had a frightening experience with her - she was caught with her hand inside her private parts, masturbating in her own faeces. I've never had a worse experience in my life"

"Many of my patients died"

"Strange smells. Patient with CA of colon, stomach coughing up odd blobs of stuff. Very thin, depressed, in pain, no social support"

"It's a mad world out there. Cruel. So many people are alone in this world, no family, friends or colleagues"

"I treated a young guy one day and met his wife. He had had a laparotomy and I did not think he was in a critical condition. The next day I went to see him and he had died and was lying covered up on his bed - I will never forget that image"

In sum, the responses reveal that generally the students appear to have been traumatically affected by working with this population. There is little evidence of Figley's active ingredient "making a difference".

1997 - **Community**

"Older people in old age homes and pregnant women (ante-natal) and post natal women. It was boring, and tedious. We did the same thing everyday. The patients were also not very co-operative which made the whole experience even worse".

"Alex - ante and post natal women, chronic disease class, house-ridden people in Alex. - very frustrating due to poor supervision and organisation. - I enjoyed the block, although I found it sad to work with the frailer elderly people - one of the old ladies was feeling very low, and I sat with her for an hour or so. All she wanted me to do was to hold her - I found it very touching and sad".

"Elderly underpriviledged patients in the townships - going to the township has be an eye opener reminding me of what I have and how fortunate I am"

"Jhb. Gen and Nazareth - learnt a lot with treating patients - enjoyable and very satisfactory!"

"At times I felt threatened (e.g. being left in Alex with unreliable transport)"

"Disturbing experiences, feeling of being in danger, unsafe in the middle of the Alexandra township as well as experiencing the poverty in which people live".

"I have encountered a lot of apathy and disorganization, and have often felt frustrated .. .. an experience that has remained with me is seeing a new born baby which was abandoned in a drain".

1998 - **Community**

"Old age patients (from 65 - 95 years old), mentally retarded patients, AIDs babies. Also general OPD patients - peripheral joint problems of patients mainly in the Alex community. I enjoyed this block. I came across an AIDs baby who is very terminal, but an extremely loving child who just wants to be held and cuddled. She is in an AIDs home and I have been back to see her about three times a week in my own time (I have got very attached to her!)"

"Old people are often very sad. This didn't make my time there enjoyable, although I did try to brighten their lives - some old people would "rather be dead" than live the life they do"

"I loved working with the aged. We didn't do any classical assessments and treatments but found a great need for physio and company in this group. They really loved having us around and chatted to us endlessly. I didn't really know how to deal with patients who really WANTED to die - felt a need for some counselling skills!"

"I have been exposed to many sides of life which I had not been i.e. abused children, burnt children, township clinic - I found visiting Etambeni Children's Home for abused and abandoned children some with AIDs very traumatic"

In sum, responses reveal evidence of the students' ability to be available to their patients and although not physically making a difference felt they had touched peoples' lives and thus "made a difference" (Figley's active ingredient in ameliorating compassion stress).

4.7.2 Occupational Therapy Students

1998 - 4th Block (indicating the diversity of patients)

"Psychiatric patient (schizoaffective disorder) ; physical patient (rheumatoid arthritis) - very enjoyable, challenging - I am learning a lot all the time. Dealing with my patient's pain has remained with me - I really feel for her, but realise she will have to endure it to get better - this is hard to deal with"

"Schizophrenic, chronic patients in institutions - a feeling of helplessness because you feel as if you cannot do anything to change their lives"

"Postal worker shot in town, now a paraplegic. He is very depressed and may die from his bed sores. Found the hospital frustrating. No proper care for patient's bedsores, for him, no OT, physio other than myself"

"Patient was waiting to die. I found this very upsetting cause I knew I could help him but he wouldn't accept it...I felt helpless"

"CVA with R hemiparesis and receptive aphasia and severe cognitive deficits - 78 year old man - I felt very frustrated as I couldn't communicate with him effectively and found it difficult to form an IRP or find activities suitable to treat him"

"I really enjoyed this block - physical stroke and hand patients - although it was very acute setting it was still very beneficial. I got to see a fuller picture of OT"

"Good experience until yesterday when I experienced helplessness with working with children. Frustrated at the lack of supervision and help received"

"Joy with bringing joy to patient's life"

"Brain tumour - I was really distressed about my first patient whose health dropped rapidly while I was treating him. He was no longer able to come to OT after a few days .....seeing him for the first time in the ward after he became critical remained with me...I have a very vivid memory of the environment and the people"

"No function in feet and no function in hands. Dependent in A.D.C. I feel neutral, I don't care as much as I used to; I am drained and not sure I want to do this anymore....my patient told me she'd never forget me and all that I have done for her. This made me feel worse".

"My patient is a 25 year old black woman who burnt both her hands after an epileptic fit - I have learnt a lot"

In sum, responses reveal little evidence of Figley's active ingredient of "making a difference". Generally the students seem to have felt a little helpless.

Responses to the open ended questions also reveal that other external variables that have impacted on the students varied from relationship problems, hijackings and deaths in extended families to examination stress. Their responses indicate that degree of risk of compassion fatigue cannot be seen simplistically and that the individual's responses must always be viewed within their individual context.

CHAPTER 5
DISCUSSION

The five hypotheses which directed the current longitudinal research will be discussed with respect to both the statistical analyses (the quantitative results) and the narratives which are presented in the Results as well as comparing the current findings to those presented in the relevant literature.

The primary aim of the current study, in response to the literature as well as to the previous longitudinal study by Durrant (1997) which assessed the degree of risk of compassion fatigue (STSD) for 3rd year physiotherapy students at the University of the Witwatersrand, was to ascertain if the results of the 1997 longitudinal study could be replicated as well as extended to a wider population of students within allied medical sciences. Thus levels of the degree of risk of compassion fatigue (STSD) for people in caring professions, specifically the 1998 physiotherapy students and occupational therapy students, was assessed and then compared to the 1997 results.

The first question asked what the degree of risk of compassion fatigue (STSD) is for the different groups of: the 1997 and the 1998 3rd year University of the Witwatersrand Physiotherapy students as well as for the 1998 3rd year Occupational Therapy students in their prolonged, intimate contact with patients.

The results indicate that the 1997 physiotherapy students were at *high risk* of compassion fatigue even before seeing or having intimate contact with patients but that, once they were exposed to patients, these students' degree of risk fell within the *extremely high risk* range.

The 1997 study's high degree of risk, prior to exposure to patients, can possibly be accounted for if viewed within the South African social and political context where, as stated in the literature review, violence and trauma are an inextricable part of daily life (Esprey, 1996). Implicit within Systems theory is the assumption that if part of a system is affected this will

affect all the interconnecting systems and as Figley (1995, p.5) states "chiasmal or secondary trauma strikes when the traumatic stress appears to "infect" the entire system after first appearing in only one member". The high incidence of theft, rape, hijackings, violent crimes and motor accidents in the Gauteng region has "infected" our society and as the South African Press Association states (1996, cited in Esprey, 1996) criminal violence is South Africa's "biggest nightmare". Thus exposure to trauma is inevitable and most of the students have been exposed to the suffering of a traumatic experience by either a friend or family member. This is especially so in Gauteng, where these students attend University, and where there are numerous daily recordings of violent injuries, accidents, violence incidents. The responses to the open-ended question of: "Has anything external to your work environment occurred during this block? (e.g. broke up with boyfriend, Granny died, etc) (see Appendix 2), show that most of the students have either had family members or close acquaintances who have been affected by the crime. Figley (1995), in response to the literature which suggests that "if a person has experienced an event outside the range of usual human experience that would be markedly distressing to almost anyone: a serious threat to his or her life or physical integrity; serious threat or harm *to his children, spouse, or other close relatives or friends*; sudden destruction of his home or community; or *seeing another person seriously injured or killed in an accident or by physical violence"* (APA, 1994 cited in Figley, 1995, p. xv), concludes that: "people can be traumatized without actually being physically harmed or threatened by harm"(1995, p. xv). It is hypothesised that these physiotherapy students were already experiencing secondary traumatic stress and at a high degree of risk of compassion fatigue even prior to treating their first patients, merely as a result of the context in which they live. In summary, it does appear that the students, as literature is suggesting, are being traumatized indirectly or secondarily.

Also, as Figley (1995, p.1) states "those who have enormous capacity for feeling and expressing empathy tend to be more at risk of compassion stress". The literature reviewed has suggested that "empathy" and "exposure" are the concepts which mainly account for why some people develop compassion fatigue/STSD whilst others do not. It is hypothesised that this innate empathic capacity applies to most of these students in the physiotherapy and occupational therapy disciplines because they have chosen professions where their work is

centred on helping, caring and healing others, and thus they may generally tend to be more at risk.

The two factors of : *social climate* which allows extreme exposure to the pain and suffering of patients as well as the students' *inherent empathic characteristics* may explain the initial elevated degree of risk to compassion fatigue (STSD), in the 1997 study.

In contrast, the 1998 physiotherapy students' results indicated that prior to seeing their first patients the physiotherapy students' degree of risk was *moderate*, but that, once exposed to patients, their scores indicated that they were at *high risk* of compassion fatigue (STSD), except during T3 and T6 when only 32 of the 42 students completed the questionnaires and the means scores fell to slightly below the high risk range. Thus, it appears that the 1998 physiotherapy students' degree of risk of compassion fatigue was not as high as the degree of risk for the 1997 physiotherapy students. It must be noted, however, that only 76% of the 1998 students completed the questionnaires after blocks CF3 and CF6 in contrast to their 97% response rate in CF1 and CF2, their 85% response rate in CF5 and their 83% response rate in CF4. It is thus tentatively hypothesised that differential attrition (this lowered completion rate) is one of the factors which could have influenced, and may be one of the factors contributing to, the CF3 and CF6 results i.e. the slightly lowered degrees of risk for 1998 physiotherapy students during the T3 and T6 blocks.

The overall generally lowered degree of risk for the 1998 students, in comparison with the 1997 students, may be attributed to a number of different individual factors or variables as suggested in the literature review. For example, the 1998 students due to a number of different reasons may not have over identified or become obsessed with the difficulties of the sufferer they were treating. Figley (1995), in the literature review, suggests that it is possible for caregivers to have considerable empathic ability and empathic concern while being exposed to enormous emotional contagion, feel a sense of achievement because their empathic response has relieved suffering and still experience very little compassion stress owing to the fact that they have avoided over identifying or becoming obsessed with the difficulties of the sufferer. This may, therefore, partly account for the overall lowered degrees of risk for the 1998

students. Alternatively, the students' ages and their gender may contribute to the difference in degree of risk. This is unlikely, however, as the results in the 1997 study indicate that males are at *less* risk than females and in the 1997 sample there were *more* men (24%) than in the 1998 sample (12%) and, in addition, the average ages of both groups were very similar - 1997 : 21 years and 1998 : 20 years. Thus, in light of these facts, it is highly improbable that the difference is attributable to difference in age or gender. Literature also suggests that neuroticism, prior trauma, preexisting anxiety or depression, family history of anxiety, personality structures of the students, are all possible reasons which could account for the discrepancy and as to why the degree of risk is lower for the 1998 as opposed to the 1997 physiotherapy group. These factors were not assessed in the current research so it is possible that these factors did contribute to a certain degree. However, one outstandingly different and very important variable between the 1997 and 1998 physiotherapy classes is that the Physiotherapy Department in 1998 changed the format of their teaching of physiotherapy students from the way they had taught the students in 1997.

During 1997 the entire physiotherapy class of 37 students were given lectures, throughout the course of the year, about the various blocks they were expected to attend during the 1997 year. This resulted in some students being well prepared prior to attending their blocks whilst others may only have attended the relevant block lecture at the end of the year *after* they had attended the block. In 1998 the department, partly due to their own observations and partly in response to the results of the 1997 study, decided to lecture the students in their allocated groups rather than as one large class. The consequence of this change in teaching methods was that each group, unlike the 1997 groups, was prepared for each specific block, prior to, as well as during it.

It is hypothesised that the lecturing to such small groups (6 groups of 7 students) may have enabled the students to participate more freely in discussions, to receive more individual attention as well as to discuss specific incidents and experiences as they occurred. The literature reviewed, e.g. Janet's mental preparation theory as well as research carried out by Blom and Kleber and McCann and Pearlman (see literature review p. 6 - 10), emphasises the importance of adequate training and supervision (individual and small group) for every

individual doing clinical work, i.e. treating patients within hospitals and state clinics. In addition, these students were given lectures relevant to the particular block they were about to attend and were at present attending. It also states that the "helper must be able to acknowledge, express and work through these painful experiences in a supportive environment because, if these feelings are not openly acknowledged and resolved, there is the risk that the helper may begin to feel numb or emotionally distant, and thus be unable to maintain a warm, empathic, and responsive stance with clients" (McCann & Pearlman, 1990 cited in Durrant 1999, p.13). It is hypothesised that the 1998 students, because of the different teaching format, were, not only in a more supportive environment because of the size of the groups and thus more able to openly acknowledge and resolve feelings than the 1997 students, but that they were also better prepared and less anxious. It is hypothesised that the altering of the lecturing from one large class to smaller groups may have facilitated the very important, according to the literature reviewed, factors of "adequate training and supervision (see 8.1.1 Training and Supervision p. 21) ; social support "within the context of a professional group with some degree of explicit formal organisation" (see 8.1.2 Professional Peer Groups p. 22); as well as informal debriefing (see 8.1.3 Debriefing p. 23). Consequently, it is hypothesised that, due to the above, the 1998 physiotherapy students' collective degree of risk of compassion fatigue (STSD), although rising to fall within the high risk range after exposure to patients, never fell within the extremely high risk range, as did the 1997's group when the teaching format had not been revised.

The 1998 occupational therapy students' results reflect a consistently high degree of risk of compassion fatigue (STSD) throughout the year and there appears to be a lack of significant difference between degrees of risk of compassion fatigue before and after patient exposure. However, it must be noted that these occupational therapy students, unlike the 3rd year physiotherapy students, had been exposed to patients during their 2nd year and thus, although the baseline T1 at the beginning of the year is used as a control, it is not possible to clearly divide between intervention and no intervention, as it is possible to do for the physiotherapy students, i.e. the questionnaire administered to the 3rd year occupational therapy students could not be done prior to patient exposure as they had already been exposed to patients in the previous year. It is hypothesised that this factor may also assist in explaining why this

baseline mean (OT '98) falls within the high risk range, i.e. the occupational therapists had already been exposed to patients and may already have experienced secondary traumatization. In addition, it must also be noted that the baseline mean of the 1998 occupational therapy students and the 1997 physiotherapy students both fall within the high risk range {1997 Physios - 38.70 (high risk); 1998 O.T.s - 38.476 (high risk)} indicating that there is no significant difference between the two groups (Physios 1997 and OTs 1998). This may be indicative of the 1998 physiotherapy students' inherent personality differences or it may highlight that the using of a different way of lecturing/teaching method - the lecturing to small, intimate groups rather than one large class - may make an extremely important difference to the students. It is possible that the breaking down of the class into small groups, the lecturing to them prior to each block with regard to the block as well as during the block, may be a very significant factor in the reduction of the degree of risk of compassion fatigue to these students. Obviously other contingencies, such as personality characteristics, the inherent characteristics of the individuals in the group and the experiencing of other contingencies may also be factors responsible for the lower mean at the baseline for the 1998 physiotherapy students. It is also possible that generally South African students in medical disciplines are at a high degree of risk and that the 1998 physiotherapy students' results are not indicative of the norm. It is suggested that further studies be conducted to ascertain what the degree of risk of compassion fatigue is for students in South Africa generally even *before* they are in contact with patients for the first time.

In sum, however, from the results obtained, it can be stated that there is a high degree of risk of compassion fatigue (STSD) for all the 1997 and 1998 3rd year physiotherapy students as well as the 1998 3rd year occupational therapy students at the University of the Witwatersrand after exposure to patients. These results seem to support the literature assertion that being exposed to another's traumatic material has the potential of producing traumatic stress in the caregiver.

The second question asked whether there is a difference in the degree of risk of compassion fatigue between the 1998 physiotherapy students and the 1998 occupational therapy students at the pre exposure and the post exposure to patients in their 3rd year. As stated above the

occupational therapy students' results are confounded because they, unlike the 3rd year physiotherapy students, were exposed to clinical patients during their 2nd year.
It is hypothesised, as previously stated, that one of the reasons why there may be a significant difference at the beginning of 1998 between the physiotherapy students and the occupational therapy students' results could be due to this difference in the occupational therapy and physiotherapy students' exposure or lack of exposure to clinical patients. As stated in the results, the OTs were exposed to, and treated patients, in their 2nd year, which was not the case with the physiotherapy students who have their initial, intimate contact with patients only in their 3rd year. If, however, Physio 98 and OT 98 results are compared at T1 (a very similar time of the year - 30/03/98 Physio 1998 means = **39.146 (high risk)** and 11/03/98 OT 1998 means =**38.476 (high risk)** both fall within the **high risk** range), when both have treated patients and there is no significant difference. Both groups are at high risk of compassion fatigue.

Once again, at the end of their 1998 year, when both physiotherapy students and occupational therapy students had experienced clinical patient exposure in state hospitals and clinics, there is no significant difference in the degree of risk between the physiotherapy students and the occupational therapy students, although the physiotherapy students' degree of risk was slightly lower than that of the occupational therapy students (**T6** (21/10/98) Physio 1998 means = **35.125 (moderate risk** - 36 - 40 = high risk and **T4** (28/10/98) OT 1998 means = **38.450 (high risk)**. However, even though the physio 1998 means are in the moderate risk range and the OT 1998 fall in the high risk range there is **no significant difference** between the two, as computed at the 0.05 level of significance (see Table 3, p. 43).

Thus results seem to support literature's assertion that there is a "cost to caring" and that there are *natural consequent behaviours and emotions that result from treating patients who have* been traumatised. Merely knowing about a traumatizing event experienced by another (Figley, 1995) (not having witnessed that traumatic event) can lead to secondary traumatization. The results indicate that there does not seem to be a difference between the responses of the students or caregivers in the allied medial sciences of physiotherapy or occupational therapy after treating patients and thus, they are at similar risk of experiencing compassion fatigue.

The third research question asked whether the different groups' responses, in the different disciplines, indicates that exposure to certain types of patients, as specified by the different medical/community blocks, contributes to compassion fatigue (STSD) risk more than other patients in other blocks do. It is not possible to suggest a trend for the occupational therapy students as they see a variety of different types of patients in each of their blocks and they are not assigned, as the physiotherapy students are, to specific types of patients during specific blocks e.g. all in one physiotherapy group went to Ortho, then to OPD then to Neuro, etc. Nevertheless, the occupational therapy students' degree of risk of compassion fatigue remained consistently high during the entire year, which also appears to support literature's assertion that all caregivers are at risk of compassion fatigue.

With regard to the physiotherapy students, the trend shown in the results cannot be seen simplistically, but must be viewed rather as the result of a complicated interrelationship between exposure to a certain type of patient, the inherent personality structure of the student, the type of patient exposure in the previously attended block, the time of year and other extraneous variables such as examinations, gender, home life experiences, social trauma, social support, training, supervision, peer group support, etc., in addition to the sociopolitical context. As hypothesised by systems theory and general systemic thinking (Jordaan & Jordaan, 1989, p.44) there is always a complicated interrelationship between "the developing person (the integratedness of the biological and the intraphychic as a psychobiological unity) and the "world-out-there" (the ecological and metaphysical)". It is suggested that the slight variations in the physiotherapy trends may, to a certain extent, be accounted for by this complexity.

In addition, Green (1994) in the literature review states that, "injury, violent or unexpected bereavement, witnessing or participating in abusive violence, *exposure to grotesque death, hearing about* the death of another person, life threat, rape and torture" are all the types of stressors associated empirically with the development of the PTSD (and inferentially the STSD) diagnosis. The literature reviewed also suggests that it is possible for a trauma worker to be exposed to the graphic details of a traumatic event only once to become traumatised. It was thus expected that students exposed, as Green (1993) states, " to the grotesque" i.e. the

more severely traumatized type of patients that are admitted into the Orthopaedic (Ortho), Medical and Surgical (Med/Surg) or Neurological (Neuro) blocks, would reflect, on the CFS, higher degrees of risk of compassion fatigue (STSD) than students' exposed to the somewhat less traumatic, although suffering, patients found in the Out Patients Departments (OPD), the Community (Com) and the Cerebral Palsy Blocks (CP).

The results confirm this expectation and show that 5 of the 6 groups' means in **1997 (83,33%)** and 4 of the 6 groups' means in **1998 (66,66%) escalate** when they attend the **Neurology** Block; that 4 of the 6 groups' means in **1997 (66,66%)** and 5 of the 6 groups' means in **1998 (83,33%) rise** when they attend the **Medical and Surgical** Block and that 4 of the 6 groups in **1997(66,66%)** and 5 of the 6 groups in **1998(83,33%) escalate** when attending the **Orthopaedic** Blocks while only 2 groups out of 6 **(33,33%) in both 1997 and 1998** groups ***rise*** for **cerebral palsy and community** and 3 groups out of 6 **(50%) in both 1997 and 1998** rise for **Outpatients Department** (see results p.53 & 54). Thus the trend shown in the results for both 1997 and 1998, although not exact, are similar and indicate that the degree of risk of compassion fatigue (STSD) generally rises when attending blocks where more "traumatised" patients are treated and is generally lowered when treating other types of patients.

The only difference between the two is the significant difference in the Com and CP block results, where the degree of risk is lower in the 1998 sample. However, they follow the **same trend**, i.e. the degree of risk of compassion fatigue is lowered for students attending these specific blocks. Thus a similar trend is reflected in both the 1997 and the 1998 physiotherapy responses to different types of patients.

Although it is difficult to distinguish between each impacting factor, it does appear that the primary risk factor in the diagnosis may be the severity of the exposure, the type of injury, exposure to grotesque death, hearing about the death of another person, witnessing abusive violence and violent or unexpected bereavement, as suggested in the literature (Green, 1994). In sum, results appear to confirm expectations, as well as support literature which states that "the severity of the exposure was associated with symptom development in the caregivers" (Johnsen, Eid, Lovstad, and Michelsen, 1997) and that the more "grotesque" or traumatically

injured the patients are, the higher the degree of risk for the caregiver.

Research question 4 asks whether the 1997 longitudinal study which focussed on the degree of risk of compassion fatigue (STSD) in 3rd year physiotherapy students is replicated by the 1998 longitudinal study of 3rd year physiotherapy students. As stated results indicate that there is a great similarity between the two results and that, although the degree of risk for the 1997 group is greater than for the 1998 group, the general trend remains very similar. The 1998 longitudinal study about the degree of risk of compassion fatigue (STSD) in 3rd year Physiotherapy students is not significantly different from the 1997 longitudinal study of 3rd year Physiotherapy students except for a significant difference in their means at the community blocks and cerebral palsied blocks. The 1998 physiotherapy students degree of risk is lower than the 1997 degree of risk **but the trend**, showing that there is a lowering of risk when treating patients at community blocks and cerebral palsied blocks, remains the same.

The changing of the teaching format for the 1998 group of physiotherapy students as a possible factor which may account for this difference, as well as the inherent differences in the student groups, have already been discussed and it is suggested that these arguments are also applicable to this finding.

In addition, the variability that is seen in the groups' means and their reactions to exposure to patients can also be explained, to a certain extent, by examining the students' narratives. The narratives and the mean scores are not always congruent. The means, as reflected on the compassion fatigue scale, may fall within the moderate and high risk range while the corresponding narratives suggest that the student may have been extremely emotionally affected by the experience. This may highlight both that trauma, as literature has stated, is a complex, interrelated phenomenon which cannot be viewed in isolation, as well as the limitations of quantitative research generally. It is beyond the scope of this discussion to enter into the debate on the advantages or disadvantages of quantitative research methods as opposed to qualitative methods of research. Suffice it to say that concepts can be interpreted in numerous ways. The concepts studied in the current research, i.e. compassion fatigue and social support, are so complex that a single approach cannot really encompass this complexity.

Also, in the reduction of narrative to a quantifiable number, the complexity of a response to a life experience is lost (Mouton & Marais, 1993). In light of these factors, this study included open-ended questions in the questionnaire administered to the students. The students' narratives suggest that many factors may influence their vulnerability to coping or not coping with secondary traumatic stress and that some factors moderate or act as a buffer against symptoms. For example, perceived social support, training, supervision and "making a difference" (Figley's active ingredient) appear to lessen the impact of trauma while other "world out there"experiences may negatively impact on students' coping abilities and contribute to their vulnerabilities. It is simplistic thinking to expect the 1997 and 1998 studies to exactly replicate one another, however, the trend is certainly similar.

In the literature review Figley (personal communication, Oct. 1997) suggests that the fact that a caregiver has "made a difference" to the life of a patient seems to be an "active ingredient" in lessening the impact of secondary traumatization. Analysis of the narratives seems to confirm that caregivers who use methods that result in rapid change in the patient or which are empowering for the patient (in that they increase their sense of competence and independence) are more resistant to compassion fatigue although compassion stress is still evident through the patient generating stressful material. The few selected responses (which merely highlight the general themes given by the students in their responses to the open ended questions) indicate that the majority of the students experienced distress, horror and emotional responses to the more traumatized patients (compassion stress) but, at the same time show that they often *did* feel that they were either making a difference to the patients' lives by empowering their patients or by seeing some results to their treatments. Thus the variability in some of the groups responses to patient exposure may reflect the moderating influence of what Figley calls the "active ingredient".

The literature review contrasts compassion stress to burnout. The latter emerges gradually and is a result of emotional exhaustion, while compassion stress can emerge suddenly with little warning (Figley, 1995). Literature states that in compassion stress there is also a sense of helplessness and confusion, and a sense of isolation from supporters. (Figley, 1995). This sense of helplessness, isolation and confusion is evident in the narratives (see especially 4.7.2

Occupational Therapy Students p.66). In addition, these narratives also reflect Figley's "active ingredient" of "making a difference" (see especially Community p.64 & 65).

Trauma is the result of a complex interrelationship of numerous factors. All these are relevant when trying to account for the high degree of risk to compassion fatigue which is indicated in this study. In systems theory and systemic thought any change in one part of a system results in a change in every other system and, as literature (Jordaan & Jordaan, 1989) argues, a person cannot be seen apart from their specific dynamic context. These students cannot be seen apart from the present South African context of violence. As Esprey (1996) has pointed out statistics are indicators of pervasive conditions, but it is really only in hearing the stories told by the students that a real understanding of human experience can be found. It is beyond the scope of this research to look in depth at the students' stories but it is suggested that in order to have greater understanding about the students' experiences, this might be done in future studies.

Literature (Figley,1995) also maintains that families and other interpersonal networks (e.g. friendships, work groups, etc.) are powerful systems for promoting recovery following traumatic experiences. The literature reviewed suggested that social support can reduce the impact on an individual by influencing the appraisal of the event and by providing coping possibilities. In addition, it suggests that perceived social support is more highly associated with health than actual support often is. Intuitively, as suggested by Flannery (1990), it is supposed that a high level of social support moderates the deleterious psychological effects which the experience of trauma can have on a person. In addition, Figley (1995) suggests that measures that measure the quality and quantity of social support are extremely important in the field of the study of traumatic stress. It was these assertions as well as Figley's (1995) statement that very few studies have specifically focussed on the relationship between social support and trauma that led to the formulation of the fifth hypothesis and research question 5 asked whether there is a correlation between perceived social support and the degree of risk of compassion fatigue.

The 1997 study revealed a strong negative correlation between social support and degrees of

risk of compassion fatigue, i.e. strong perceived social support seemed to indicate lowered degrees of risk of compassion fatigue and vise versa. The overall 1997 results indicated relatively high and consistent perceived social support with low variability. Results of the 1997 longitudinal study (Durrant, 1997) seemed to confirm some literature reports that perceived social support influences the degree of risk to compassion fatigue in that it appeared to moderate the influence of exposure to traumatized patients and this is, to a certain extent, replicated in the 1998 study. The 1998 study results indicate that, although there is a negative correlation between perceived social support and degree of risk of compassion fatigue, some of these are not significant when computed at the 0.05 level of significance with the relevant sample size. Thus, it cannot be stated that it is invariant that these correlations are always significant even though the trend indicates this is the case.

Although all the students appear to have experienced relatively good perceived social support and all the students indicate in their responses to the CSQ that they have a variety of people to whom they can turn in times of need, results seem to be of variable significance. The hypothesis that there is always a negative correlation between the scores of the degree of risk of compassion fatigue (STSD) and the scores for perceived social support cannot be unqualifiably accepted. However, although results are not invariant, there does appear to be a general trend indicating that high perceived social support moderates the impact of trauma.

This conclusion may be as a result of different factors. This research relies on an instrument to measure social support which may have limited applicability. In addition, literature states that the definition of the construct social support is both difficult and complex as it is not a concept with a single, unambiguous meaning and it can be interpreted in a number of ways. In addition it cannot be easily operationalised. Also, in the reduction of narrative into a quantifiable number, the complexity of responses to a concept is often lost. Intuitively it is thought that social support reduces the impact on the individual by influencing appraisal of the event and by providing coping possibilities. However, as stated in the literature there is a lack of agreement on the definition and, it is hypothesised, currently there is no assessment instrument that can comprehensively measure the central components of social support adequately. In addition, simplistic cause and effect thinking (good social support means low

degree of risk) ignores the complexity of a person's life with its multitude of impacting variables.

5.1 Who is Vulnerable to Compassion Fatigue?

Figures 1 and 2 (see Appendix 1 p. 102) present the two models Figley (1995) uses to account for how and why some people develop compassion fatigue while others do not. At the heart of the theory are the concepts of empathy and exposure. It is hypothesised that people choose caregiving professions such as physiotherapy and occupational therapy because they have empathy and concern. If students in medical disciplines are not empathic or exposed to the traumatized, there should be little concern for compassion fatigue (Figley, 1995). Results of this study appear to have validated the assertion that all people in caring professions are at risk and vulnerable to compassion fatigue.

Although vulnerability is attributable to a number of reasons, the principal reason seems to be that caregivers who work with trauma patients are surrounded by what Figley (1995, p.15) terms "the extreme intensity of trauma-inducing factors". The very nature of the work that these students do in South African State Hospitals is conducive to this intense exposure. Not only are they treating very traumatised people but the conditions in which they are required to work are also very inadequate and can themselves be traumatising. The literature reviewed states that caregivers use empathy as a major resource to help people and that empathy is a key factor in the induction of traumatic material from the primary to the secondary victim (Figley, 1995). As postulated previously, empathy appears to be an innate characteristic in people who choose to work within caring professions such as physiotherapy and occupational therapy. If, in addition, students in these caring professions are experiencing other life stressors such as burn out, examination stress or other social stressors, as indicated in some of their responses to the open ended questions, this will exacerbate their degree of risk to compassion fatigue.

The results of this two year longitudinal study indicate that the 1997 and the 1998 3rd year physiotherapy students and the 1998 3rd year occupational therapy students are all at risk of compassion fatigue. This suggests that the literature is correct and compassion stress is the natural stress which results from helping or wanting to help a traumatized or suffering person.

Thus it seems that all students within the allied medical disciplines, not only physiotherapy and occupational therapy, are vulnerable to compassion fatigue.

In view of the above findings it is suggested that further studies be carried out to investigate if the results of these two longitudinal studies can be replicated and extended to other medical science students or populations, for example, to the medical students and interns working in South African state hospitals and clinics. This would add to the generalisability of these results. If future studies show strong support for the risk of compassion fatigue in all students within allied medical sciences it may be imperative that the traditional manner in which lecturing is conducted is reviewed and revised.

Limitations of the study as well as practical and theoretical implications are presented in the following section.

5.2 Limitations of the current study:

Although findings in the current study appear to be valid, and, it is suggested, make a contribution to the field of trauma as well as to the Departments of Physiotherapy and Occupational Therapy at the University of the Witwatersrand, all methodologies used by researchers are essentially limited, and subject to flaws in respect of their validity. The scores referred to are mainly mean symptom scores and do not reflect the individual therapist's experiences. Many students reported episodes of extreme distress which were overwhelming for them for a short period of time. This was reflected in the individual higher levels of symptomatology on the compassion fatigue scale and by narrative responses to open-ended questions included in the questionnaire but overall these were masked by the quantitative nature of the research.

The following methodological limitations have been identified, and their potential influence on the results of this study are recognised.

Major limitations to this longitudinal research were time and the highly subjective process of non-probability convenience sampling used in this study. In addition, owing to the longitudinal nature of the design the students knew the questionnaire so well by the end of the study that there was the danger of instrument reactivity and test sensitivity (Rosnow & Rosenthal, 1996), and they may not have been as diligent and thorough in their responses. Also, as it is commonly known, writing down stories can be cathartic and may have been helpful in relieving stress and the written responses to the open ended questions in themselves served as a moderating influence in the degree of risk.

The sample used did not allow for any flexibility in scheduling or for randomisation (Rosnow & Rosenthal, 1996). The students were allocated to specific groups and the order in which the groups went to the different blocks as well as the dates they attended these were organised by the Physiotherapy Department.

In view of the sample size (n=100) these the research findings could tentatively be generalised to similar medical science populations in South Africa (Kerlinger, 1986), however, generalisability of the study's results is reduced because as a nonprobability sampling the probability that any person from a specified population will be selected is not known (Esprey, 1996). .

There was also a restricting stipulation that the filling in of the questionnaire would not take longer than 20 minutes to complete. This was necessary especially as it had to be administered 7 times during the year and needed to be completed by the students during their lecture time. A qualitative research may have elucidated more about the students' understanding of their experiences but due to time restrictions quantitative methods were more practical.

Another limitation of this study was the validity of the scales used for measuring compassion fatigue and social support. Difficulties with regard to the construct social support have been discussed in the discussion. With regard to compassion fatigue, as far as the researcher is aware, the CFS has not been normalised for South Africa as it was developed in the U.S.A. and it is believed is still under development. South Africa's current socio-political climate is

very different from that in the U.S.A. Although the open-ended responses and the narrative data, it is suggested, illuminate the findings and add real meaning to otherwise sterile statistics as well as reflect the researcher's expectations of the risk of compassion fatigue in certain blocks, the scale did not always confirm these and it is suggested that this scale might not be as valid in the South African context as it is within the United States.

A limitation of any longitudinal research might be what is termed the Hawthorne Effect being the distortions in behaviour that occur when people know that they are subjects of a study. These effects are similar to instrument reactivity, but go beyond reactions to the instrument itself, being reactions to the experience of being the subject of a research study. In addition, diffusion of information (Rosnow & Rosenthal, 1996), where the students could, over time (this was a two year longitudinal study) most probably decipher what the researcher was trying to research by the focus of the questions as well as by communicating with each other and this could have led to response bias.

A major limitation of all longitudinal studies is differential attrition, which refers to the loss of subjects from one or more groups in the study and refers to differential subject loss, manifesting in differences in the number of subjects which are lost in one of the groups participating in the study as opposed to others (Wits. Hons. Course Research Design and Analysis Reading Pack, 1997). In many studies which take place over time, subjects may be lost because of events that preclude continuation and this may have the effect of establishing another variable which could influence the results, and it may be difficult to know if attrition alone accounted for the differences observed in the groups (ibid). In the 1997 study there was minimal differential attrition as all the students (n=37) completed the questionnaires after each block (7 observations in all) except one male in CP Block at T5. However, in the 1998 longitudinal study the response rate was not so consistent (see Response Rate p.35). It has been hypothesised in the discussion that this factor was largely responsible for the lowered degrees of risk of compassion fatigue for 1998 physiotherapy students in CF3 and CF6..

5.3 Implications of the research

Despite the limitations identified above some important implications have arisen from these findings. Although these results will not be of any benefit to the actual subjects, the findings of the current study are seen to make a helpful contribution to the field of trauma research as well as to the Departments of Physiotherapy and Occupational Therapy at the University of the Witwatersrand. They help validate literature's assertion that all people in caregiving professions are at risk of compassion fatigue and add some insight into the students' experiences as well as some suggestions for future interventions that may help ameliorate the effects of secondary traumatization (compassion fatigue).

The results of this study support Figley's (1995) assertion that caregivers, in this study 1997 and 1998 3rd year physiotherapy and 3rd year occupational therapy students (n=100), experience, as *a natural consequent of caring work*, compassion stress and that they are at high risk of compassion fatigue. Figley's (1995) assertion that merely working within a trauma intensive atmosphere is not only stressful but that in the process of empathizing with a traumatized person, which is helpful for understanding and caring for a patient, the caregiver may be traumatized, has been reinforced. However, because of the current South African social climate most people have experienced some traumatic event in their own lives, or heard about trauma experienced by friends or significant others, ther is the possibility that South African students in the medical sciences are more vulnerable to the risk of compassion fatigue than other students working in other countries where crime and violence are not as prevalent. The important issue is to recognise that exposure to traumatized clients can affect the helper. Too often training programs and work settings directly or inadvertently support a position which leaves helpers feeling weak, incompetent, or emotionally unstable if impacted on by work with clients. It is more realistic and more helpful to recognise the inevitability of being affected by the work (Rosenbloom, Pratt & Pearlman, 1995) and prepare the students appropriately.

Ultimately the knowledge gained from any empirical endeavours should be translated into practice (Esprey, 1996) and thus, drawing on the findings of the current study and in view of

the fact that these students confront trauma on a predictable although episodic basis, it is suggested that they may need specific training in trauma stress. For as stated by Bill (1995, p.134): "Primary care providers are often on the front line and have a unique opportunity to recognize and treat many trauma-based problems for their patients. This opens many possibilities for education, prevention, and motivating patients to become involved in their own healing. Educational and preventive thinking is needed for medical and surgical procedures, stress management, preventive health care, social support, and a self-help viewpoint"

The literature (van der Kolk, McFarlane & Weisaeth, 1996) has also argued that the individual's state of mental preparation, in addition to the individual's belief system and emotional makeup, determines the degree of physiological arousal in the face of trauma and also that traumatic experiences might not fit into existing cognitive schemas and may need to be integrated. Brom & Kleber (1989) have argued that a traumatic experience shatters one's basic assumptions and beliefs about the world and oneself and Horowitz (1976) asserted that in order to recover from the effects of trauma it is important to give meaning to traumatic experiences. The results of this study suggest that by teaching the students in small, intimate groups where lectures are relevant to practical work a great deal of this mental preparation, integration and meaning appears to have occurred and made a considerable impact on reducing the degree of risk of compassion fatigue. Consequently it is a suggestion of this study that relevant departments lecturing students consider this form of teaching.

The results also seem to suggest that Figley's (1997) "active ingredient" findings - where caregivers who use methods which either result in rapid change in the client, or are empowering for the client or are client-centred, result in the caregiver being more resistant to compassion fatigue even though the compassion stress remains constant - also needs to be utilized. In the Blocks where the physiotherapy and the occupational therapy students can make a treatment difference, this difference needs to be emphasised by the supervisors or lecturers to the students, while in the Blocks, e.g. Neurological or Community's Old Age, where actual treatment might not really make as great a difference in their patient's lives, the students need to be given psychoeducation or counselling skills on how to be more "client-centred" or to help empower (increase their sense of competence and independence) their

patients.

Caregiving students form an important link in the chain of social support that a patient receives. It may, as literature (Ursano, Grieger and McCarroll 1996) suggests, be appropriate for these students to be given further education into the expected stressors of trauma because, as literature (McFarlane and van der Kolk, 1996) maintains, caregivers who are able to grasp the impact of trauma on both their own lives as well as on their patients' lives are able to respond appropriately and can make a critical difference.

In seeking to minimize the impact of secondary exposure it is suggested that students be taught that:

1) they need to clarify their own sense of meaning and purpose in life.
2) if they feel overwhelmed in their work, they need to break the task(s) down into manageable components
3) they need to identify their own personal and social resources and supports and then plan strategies for their use
4) they need to take care of themselves physically, mentally and spiritually and thus need to maintain a high-energy level through proper diet, sleep, exercise, play, laughter, creativity and dreaming, i.e. to use their own self-soothing capacities in a positive manner
5) they need to identify those triggers which may cause them to experience vicarious traumatization (images, actions)
6) they need to get therapy if personal issues and past traumas "get in the way"
7) they need to know their own limitations (Williams & Sommer, 1995)
8) they need to know that secondary traumatic stress is a **normal** consequent of caring for the traumatized and that they are not incompetent and weak if impacted upon by their work

Training and adequate support from supervisors can alter the experience of exposure, decrease shock and the unexpected as well as maximise the sense of mastery. Supervision can mitigate the effects of vicarious traumatization by assisting the therapist in identifying painful

countertransference dynamics. Supervision which is respectful of the students' need to identify and express the powerful feelings elicited by this work can help to create a safe, supporting environment.

It is suggested that, in addition to trauma education, the Department regularly hold debriefing sessions for all the students. These can take the form of group debriefings and can be done on a very informal basis at the end of each block. This might be unnecessary if the class is divided into small groups for lectures anyway. Although further research needs to be carried out in order to investigate if the change in the teaching format in the Department of Physiotherapy has had the positive impact it appears to have had, results seem to suggest that where the students are taught within groups rather than lectured to in one large group, their levels of risk of compassion fatigue have been lower. The smaller groups seem to have enabled the students to realise that other students experience similar problems as well as help them work through any issues that may have arisen. Thus it is possible that natural debriefing takes place when there is a small group.

Because primary care providers are trained to provide rapid and efficient relief of the patient's symptoms, an inability to diagnose correctly and relieve the patient's symptoms can be a major work-related stressor for the primary care provider (Bills, 1995). Most caregivers have identified patients that they consider problem patients. They will present the primary care giver with somatic complaints like chest pains, chronic pain, chronic headaches, and gastrointestinal complaints, as well as anxiety, depression, sleep problems, nightmares, suicidal ideation and memory disturbances. This complex array of symptoms does not necessarily meet criteria for a specific medical or psychiatric diagnosis and yet their suffering is unmistakable. In cases such as these students need to be informed that a trauma-based approach may be helpful and, according to Bills (1995, p.123) "the most important thing you can do for these patients is to ask them questions about what has happened to them recently or in the past".

Also, as Cerney (1995, p.145) states "what appears to be most helpful to therapists who work with trauma victims is for them to acknowledge that they cannot treat every patient. They must also be connected with their peers in support groups and supervision groups. They must

not isolate themselves. To maintain some opportunity to express their feelings of pain, guilt, and responsibility, they need to discuss their cases regularly with their colleagues and supervisors" for in an accepting atmosphere, these traumatized caregivers can gain support and assistance in lowering their degree of risk of compassion fatigue.

In sum, the main implication derived from the results of this study seems to be that students in allied medical sciences need proper, adequate preparation and support.

CHAPTER 6
SUMMARY AND CONCLUSION

Literature in the field of trauma, and especially Post Traumatic Stress Disorder (PTSD), has shown that caregivers experience secondary traumatic stress through exposure to anyone who suffers. Compassion stress is the same as secondary traumatic stress (STS) (Figley, 1995). Prolonged exposure to compassion stress can result in *compassion fatigue* which is identical to secondary traumatic stress disorder (STSD) (Figley, 1995). Compassion fatigue (STSD) can emerge suddenly, with little warning and incorporates feelings of helplessness, confusion and a sense of isolation from supporters in contrast to burnout which emerges gradually and is the result of emotional exhaustion.

Professional caregivers, and those studying to be professional caregivers, form an important link in the chain of social support that a patient receives while they themselves might or might not have a strong social support system. McFarlane and van der Kolk (1996) stress that having caregivers who are able to grasp the impact of trauma on both their own lives as well as on their patients' and to respond appropriately can make the critical difference between recovering and succumbing of both patient and therapist. Thus training, adequate support from supervisors and appropriate debriefings are essential as they can alter the experience of caregivers exposed to trauma and by caring for caregivers strong sustaining communities are built.

In light of the literature review certain research questions and hypotheses were formulated. A sample of 100 (86 women and 14 men, ages ranging from 19 to 32 years) 1997 and 1998 3rd year Physiotherapy students and 1998 3rd year Occupational Therapy students was drawn from the University of the Witwatersrand over a two year period (37 [consisting of 28 women; 9 men] 3rd year Physiotherapy students from year 1997; 42 [consisting of 37 females; 5 males] 3rd year Physiotherapy students from year 1998 and 21 female 3rd year Occupational Therapy students from year 1998. This longitudinal, non-experimental, time series intervention between individuals; within groups and between disciplines research design was of an exploratory

nature. A questionnaire incorporating demographics, the Compassion Fatigue Test and the Crisis Support Questionnaire were completed by both the 1997 and 1998 Physiotherapy students *prior* to their going on their first block for the year. The 1998 3rd year Occupational Therapy students, although previously having been exposed to patients (and who only attended four blocks in comparison to the physiotherapy students' seven blocks) completed the same questionnaire at times approximately similar to the physiotherapy students. This data forms the baseline of the research.

The same questionnaire was administered 7 times to every physiotherapy student and 4 times to each occupational therapy student at the end of each of their "blocks". Physiotherapy blocks included neurology, orthopaedics, outpatients departments, medical and surgical, cerebral palsy and community. Occupational therapy blocks were mixed and included psychiatric, community, physical and medical and surgical. Confidentiality was attained by each student filling in the last three numbers and letter of their student card. The response rate for 1997 was consistently good while the 1998 response rate was less consistent.

Results indicate that the 1997 and 1998 3rd year Physiotherapy students as well as the 1998 3rd year Occupational Therapy students displayed a high degree of risk of compassion fatigue (secondary traumatization). These findings support the literature which states that "there is a cost to caring" and that "caregivers experience compassion stress (STS) and may be at high risk for compassion fatigue (STSD)"

Results indicate that there was a difference between the degree of risk of compassion fatigue between the 1998 physiotherapy students and the 1998 occupational therapy students at the beginning of the year but not at post exposure to patients. However, if the means of the 1998 physiotherapy and occupational therapy students are compared at a very similar time (Physios 30/ 03/98 - 39.146 **high risk** and O.T.s 11/03/98 - 38.476 **high risk**) when both groups of students have been exposed to patients there is no difference. There is also no significant difference between the two allied medical groups at the end of year 1998, when both physiotherapy and occupational students had been exposed to clinical patients. It is hypothesised that the significant difference at the beginning of 1998 may have solely been the

result of the difference in the students' previous exposure or lack of exposure to patients.

Results also show a trend within the physiotherapy groups that indicates that exposure to patients in the "neurology", "medical and surgical" and "orthopaedic" blocks (i.e. where they treat the more severe injuries and more traumatized patients) raises the degree of risk of compassion fatigue (STSD) to a greater extent than exposure to patients in the "community", "cerebral palsy" and "Outpatients Department" blocks (were they treat difficult populations as compared with seriously injured) does. The trend supports the literature (Green, 1994) which states that "injury, violent or unexpected bereavement, witnessing or participating in abusive violence, exposure to grotesque death, hearing about the death of another person, life threat, rape and torture" are all the types of stressors associated empirically with the development of the PTSD (and inferentially the STSD) diagnosis. The literature reviewed also suggests that it is possible for a trauma worker to be exposed to the graphic details of a traumatic event only once to become traumatised and the results of this study appear to confirm this assertion.

Literature (Figley, 1995) suggests that if there is an awareness of compassion fatigue being an occupational hazard of the caring profession there appears to be an obligation to students to prepare them for these hazards by incorporating stress, burnout and compassion fatigue literature/ education into their curriculum, and into their supervision in practica, while simultaneously emphasizing the rewards of this type of work. As Figley (1995, p. 253) states: "The work of helping traumatized people is gratifying. Helpers discover early in their careers that those who are traumatized can be relieved by a caring professional who understands and respects their pain, can engender hope in recovering from it, and can go about the task with confidence and succeed quickly. By understanding compassion stress and compassion fatigue, the natural, predictable, treatable, and preventable consequences of trauma work, we can keep these caring professionals at work and satisfied with it". Also, as literature states, caregivers and victims are interdependent and a part of a community which, when well cared for sustain their members during times of failed self-sufficiency and that by caring for our caregivers we can build strong sustaining communities. Consequently, in light of the results, certain implications and practical interventions were suggested. In addition, ideas for future research were also offered.

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APPENDIX I

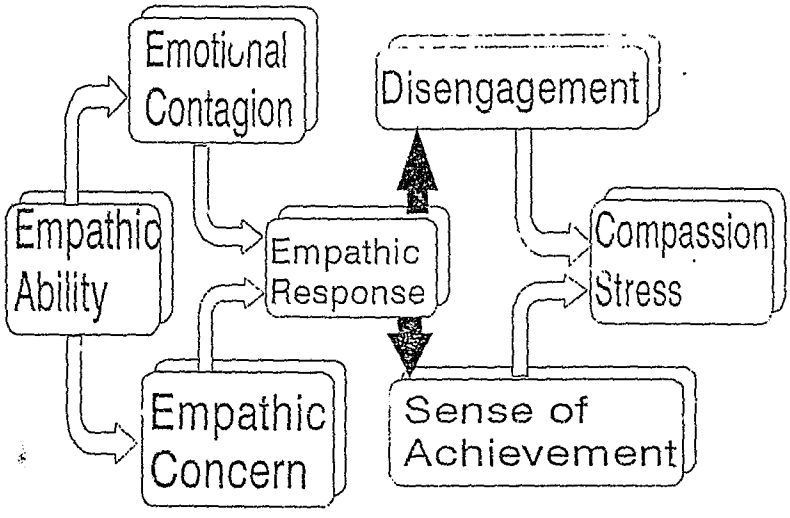


Figure 1. A Model of Compassion Stress

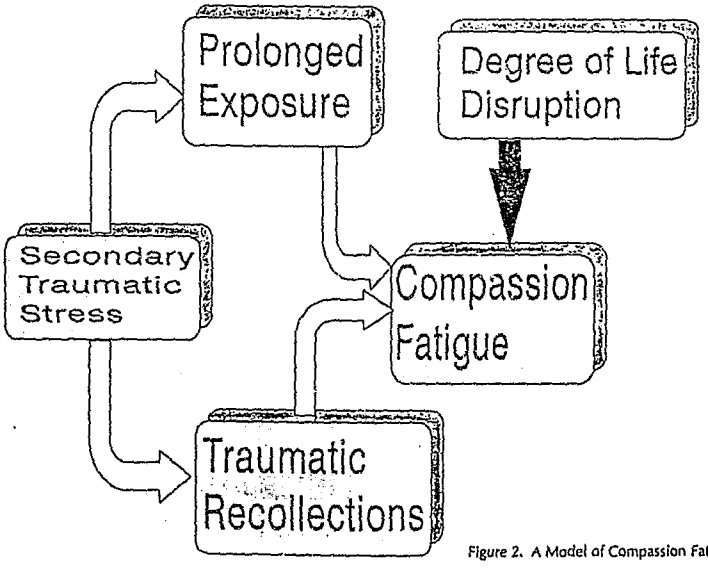


Figure 2. A Model of Compassion Fatigue

APPENDIX 2

RESEARCHER ... PAM DURRANT

You are invited to participate in a Research study which will look at the impact of different experiences on students. This questionnaire should take you less than half-an-hour. I will need to repeat this questionnaire at the end of each block. The information which you give will be anonymous. If you would like to withdraw from the study at any time, please feel free to do so. You are under no obligation to answer the questionnaire. Should you have any questions, please speak to the researcher or she may be contacted at this number: 728-4363. If you decide to take part in this study, please sign below to show that you have consented voluntarily to participate.

Thank you for your co-operation and assistance.

SIGNATURE OF CONSENT: _____

THERE ARE THREE PARTS TO THIS QUESTIONNAIRE.

PLEASE COMPLETE ALL THREE SECTIONS. IF THERE IS ANYTHING WHICH YOU DO NOT UNDERSTAND, PLEASE ASK THE RESEARCHER.

SECTION 1:

GENERAL INFORMATION

Date: _____

Age: _____

Last 3 numbers and letter of

Student No.: _____

Gender: M ☐ F ☐

Marital Status: ☐ ☐ ☐ ☐

Single Married Separated Divorced

With whom are you residing?

Partner ☐

Family Member ☐

Residence ☐

Digs ☐

Alone ☐

SECTION 2

Consider each of the following characteristics about you and your current situation. Tick the column which gives the most appropriate response. Answer all items, even if not applicable.

		Rarely/ never	*At times*	*Not sure*	*Often*	*Very Often*
1	I force myself to avoid certain thoughts or feelings that remind me of a frightening experience					
2	I find myself avoiding certain activities or situations because they remind me of a frightening experience					
3	I have gaps in my memory about frightening events					
4	I feel estranged from others					
5	I have difficulty falling or staying asleep					
6	I have outbursts of anger or irritation with little provocation					
7	I startle easily					
8	While working with a patient who was a victim I thought about violence against the perpetrator					
9	I am a sensitive person					
10	I have had flashbacks connected to my patients					
11	I have had first-hand experience with traumatic events in my adult life					
12	I have had first-hand experience with traumatic events in my childhood					
13	I have thought that I need to "work-through" a traumatic experience in my life					
14	I have thought that I need more close friends					
15	I have thought that there is no one to talk with about highly stressful experiences					
16	I have concluded that I work too hard for my own good					
17	I am frightened of things a patient has said or done to me					
18	I experience troubling dreams similar to those of a patient of mine					
19	I have experienced intrusive thoughts of sessions with especially difficult patients					
20	I have suddenly and involuntarily recalled a frightening experience while working with a patient					
21	I am preoccupied with more than one patient					
22	I am losing sleep over a patient's traumatic experiences					
23	I have thought that I might have been "infected" by the traumatic stress of my patients					
24	I remind myself to be less concerned about the well-being of my patients					
25	I have felt trapped by my work as a Physiotherapist/O.T.					
26	I have felt a sense of hopelessness associated with working with patients					
27	I have felt "on edge" about various things and I attribute this to working with certain patients					
28	I have wished that I could avoid working with some patients					
29	I have been in danger working with patients					
30	I have felt that my patients dislike me personally					

SECTION 3:

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

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

Never ☐ Sometimes ☐ Often ☐ Always ☐

Who is willing to listen?

1) _____ 4) _____
2) _____ 5) _____
3) _____ 6) _____

2) **Do you have personal contact with other people with similar experiences?**

Never ☐ Sometimes ☐ Often ☐ Always ☐

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

Never ☐ Sometimes ☐ Often ☐ Always ☐

Who are you able to talk with?

1) _____ 4) _____
2) _____ 5) _____
3) _____ 6) _____

4) **Are people sympathetic and supportive?**

Never ☐ Sometimes ☐ Often ☐ Always ☐

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

Never ☐ Sometimes ☐ Often ☐ Always ☐

Who is helpful?

1) _____ 4) _____
2) _____ 5) _____
3) _____ 6) _____

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

Never	Sometimes	Often	Always
☐	☐	☐	☐

Who makes you feel worse?

1) _____ 4) _____
2) _____ 5) _____
3) _____ 6) _____

7) **Overall, are you satisfied with the support you receive?**

Never	Sometimes	Often	Always
☐	☐	☐	☐

For completion after Blocks:

Which block have you just completed?

_____

Please give a brief description of the type of patient you have been treating.

_____

_____

What has been your experience with this block?

_____

_____

_____

_____

Is there any particular experience you have had in this block which has remained with you?

_____

_____

_____

_____

_____

_____

Has anything external to your work environment occurred during this block? (E.g. broke up with boyfriend, Granny died etc)

APPENDIX 3

309.81 Posttraumatic Stress Disorder

Diagnostic Features

The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate (Criterion A1). The person's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior) (Criterion A2). The characteristic symptoms resulting from the exposure to the extreme trauma include persistent reexperiencing of the traumatic event (Criterion B), persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (Criterion C), and persistent symptoms of increased arousal (Criterion D). The full symptom picture must be present for more than 1 month (Criterion E), and the disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (Criterion F).

Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury. Witnessed events include, but are not limited to, observing the serious injury or unnatural death of another person due to violent assault, accident, war, or disaster or unexpectedly witnessing a dead body or body parts. Events experienced by others that are learned about include, but are not limited to, violent personal assault, serious accident, or serious injury experienced by a family member or a close friend; learning about the sudden, unexpected death of a family member or a close friend; or learning that one's child has a life-threatening disease. The disorder may be especially severe or long lasting when the stressor is of human design (e.g., torture, rape). The likelihood of developing this disorder may increase as the intensity of and physical proximity to the stressor increase.

The traumatic event can be reexperienced in various ways. Commonly the person has recurrent and intrusive recollections of the event (Criterion B1) or recurrent distressing dreams during which the event is replayed (Criterion B2). In rare instances, the person experiences dissociative states that last from a few seconds to several hours, or even days, during which components of the event are relived and the person behaves as though experiencing the event at that moment (Criterion B3). Intense psychological distress (Criterion B4) or physiological reactivity (Criterion B5) often occurs when the person is exposed to triggering events that resemble or symbolize an aspect of the traumatic event (e.g., anniversaries of the traumatic event; cold, snowy weather or uniformed guards for survivors of death camps in cold climates; hot, humid weather for combat veterans of the South Pacific; entering any elevator for a woman who was raped in an elevator).

Stimuli associated with the trauma are persistently avoided. The person commonly makes deliberate efforts to avoid thoughts, feelings, or conversations about the traumatic

event (Criterion C1) and to avoid activities, situations, or people who arouse recollections of it (Criterion C2). This avoidance of reminders may include amnesia for an important aspect of the traumatic event (Criterion C3). Diminished responsiveness to the external world, referred to as "psychic numbing" or "emotional anesthesia," usually begins soon after the traumatic event. The individual may complain of having markedly diminished interest or participation in previously enjoyed activities (Criterion C4), of feeling detached or estranged from other people (Criterion C5), or of having markedly reduced ability to feel emotions (especially those associated with intimacy, tenderness, and sexuality) (Criterion C6). The individual may have a sense of a foreshortened future (e.g., not expecting to have a career, marriage, children, or a normal life span) (Criterion C7).

The individual has persistent symptoms of anxiety or increased arousal that were not present before the trauma. These symptoms may include difficulty falling or staying asleep that may be due to recurrent nightmares during which the traumatic event is relived (Criterion D1), hypervigilance (Criterion D4), and exaggerated startle response (Criterion D5). Some individuals report irritability or outbursts of anger (Criterion D2) or difficulty concentrating or completing tasks (Criterion D3).

Specifiers

The following specifiers may be used to specify onset and duration of the symptoms of Posttraumatic Stress Disorder:

Acute. This specifier should be used when the duration of symptoms is less than 3 months.

Chronic. This specifier should be used when the symptoms last 3 months or longer.

With Delayed Onset. This specifier indicates that at least 6 months have passed between the traumatic event and the onset of the symptoms.

Associated Features and Disorders

Associated descriptive features and mental disorders. Individuals with Posttraumatic Stress Disorder may describe painful guilt feelings about surviving when others did not survive or about the things they had to do to survive. Phobic avoidance of situations or activities that resemble or symbolize the original trauma may interfere with interpersonal relationships and lead to marital conflict, divorce, or loss of job. The following associated constellation of symptoms may occur and are more commonly seen in association with an interpersonal stressor (e.g., childhood sexual or physical abuse, domestic battering, being taken hostage, incarceration as a prisoner of war or in a concentration camp, torture): impaired affect modulation; self-destructive and impulsive behavior; dissociative symptoms; somatic complaints; feelings of ineffectiveness, shame, despair, or hopelessness; feeling permanently damaged; a loss of previously sustained beliefs; hostility; social withdrawal; feeling constantly threatened; impaired relationships with others; or a change from the individual's previous personality characteristics.

There may be increased risk of Panic Disorder, Agoraphobia, Obsessive-Compulsive Disorder, Social Phobia, Specific Phobia, Major Depressive Disorder, Somatization Disorder, and Substance-Related Disorders. It is not known to what extent these disorders precede or follow the onset of Posttraumatic Stress Disorder.

Diagnostic criteria for 309.81 Posttraumatic Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others

(continued)

☐ **Diagnostic criteria for 309.81 Posttraumatic Stress Disorder** (*continued*)

(2) the person's response involved intense fear, helplessness, or horror. **Note:** In children, this may be expressed instead by disorganized or agitated behavior

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

(1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.

(2) recurrent distressing dreams of the event. **Note:** In children, there may be frightening dreams without recognizable content.

(3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** In young children, trauma-specific reenactment may occur.

(4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

(5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

(1) efforts to avoid thoughts, feelings, or conversations associated with the trauma

(2) efforts to avoid activities, places, or people that arouse recollections of the trauma

(3) inability to recall an important aspect of the trauma

(4) markedly diminished interest or participation in significant activities

(5) feeling of detachment or estrangement from others

(6) restricted range of affect (e.g., unable to have loving feelings)

(7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

(1) difficulty falling or staying asleep

(2) irritability or outbursts of anger

(3) difficulty concentrating

(4) hypervigilance

(5) exaggerated startle response

(continued)

☐ **Diagnostic criteria for 309.81 Posttraumatic Stress Disorder** (*continued*)

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months

Chronic: if duration of symptoms is 3 months or more

Specify if:

With Delayed Onset: if onset of symptoms is at least 6 months after the stressor

Author Durrant P
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