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**Indirect exposure to Client Trauma and the  
Impact on  
Trainee Clinical Psychologists: Secondary  
Traumatic Stress or Vicarious  
Traumatization?**

**Rakhee Makadia BSc (Hons)**

**A thesis submitted for the degree of Doctorate of  
Clinical Psychology**

**Clinical Psychology Unit  
Department of Psychology  
University of Sheffield**

**July 2011**

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## **Declaration**

This work has not been submitted for any other degree or to any other institution.

# Structure and word counts

## Structure

### *Section 1*

Target Journal for Literature review: *Clinical Psychology Review*

### *Section 2*

Target Journal for Literature review: *British Journal of Clinical Psychology*

## Word Count

### *Section 1*

Literature Review	8000
References	1582
Total	9582

### *Section 2*

Research Report	11955
References	1839
Total	13794

<i>Appendices</i>	3334
<b>Total word count</b> (excluding references and appendices)	19955
<b>Total word count</b> (including references and appendices)	26710

## **Thesis Abstract**

This thesis consists of a literature review and research report

### **Section 1: Literature Review**

Constructs of secondary traumatic stress (STS) and vicarious traumatization (VT) have been proposed to describe the negative impact of working with traumatized clients. In previous reviews of the literature, evidence to support these constructs has been limited and inconsistent; consequently their validity has been questioned. This review seeks to reassess the evidence from recent empirical findings. The review concluded that evidence to support the constructs remains limited, but tentatively there is greater evidence to support STS in contrast to VT.

### **Section 2: Research Report**

This study investigates the extent of exposure to trauma work among trainee clinical psychologists and its impact on well-being. The study seeks to assess which theoretical model (STS, VT, or even a non-specific model of general psychological distress) best accounts for any negative effects associated with indirect exposure to client trauma. 564 trainees participated in an online survey, which included self-report measures of general psychological distress, trauma symptoms and disrupted beliefs. Most trainees had caseloads of 1-2 trauma cases, with the most common trauma being sexual abuse. Exposure to trauma work was not related to general psychological distress or disrupted beliefs, but was a significant predictor of trauma symptoms. Level of stress of clinical work and quality of trauma training contributed to the variance in trauma symptoms. It is concluded that the study provides support for STS and lacks evidence to support VT or a non-specific model of general psychological distress.

# Acknowledgements

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## **Section 1: Literature Review**

**Current status of vicarious traumatization and secondary traumatic stress: The impact on mental health professionals exposed to traumatized clients.**

**Current status of vicarious traumatization and secondary traumatic stress: The impact on mental health professionals exposed to traumatized clients.**

**Abstract**

Various constructs have been proposed to describe the negative impact of working with traumatized clients, these include secondary traumatic stress (STS) (Figley, 1995) and vicarious traumatization (VT) (McCann & Pearlman, 1990). There has been much confusion about the overlapping nature of these constructs and related terms. In previous reviews of the literature, evidence to support these constructs has been limited and inconsistent; consequently the validity of these phenomena questioned. This review describes models of STS and VT and aims to evaluate recent empirical findings to establish whether the evidence for either of these constructs has been strengthened. Methodological disparities and weaknesses across studies are evident, thus tentative conclusions are drawn. In summary, evidence to support the constructs is limited, but there is greater supportive evidence for STS compared to VT. Clinical implications and recommendations for future research are suggested.

## **1. Introduction**

Over the last 20 years, literature has proposed that mental health professionals working with traumatized clients are at risk of exhibiting distress similar to traumatized clients in the form of trauma related disrupted beliefs, depicting changes in cognitive schemata (McCann & Pearlman, 1990) and trauma specific symptoms (Figley, 1995). The process involves indirect exposure to trauma, which is secondary (vicarious) in nature and these adverse consequences are considered to be a form of secondary traumatization (Figley, 1995; McCann & Pearlman, 1990). These proposed adverse effects have personal and professional implications for mental health professionals; potentially affecting the services clients receive. Those who support the phenomenon highlight the importance of developing appropriate interventions to reduce these risks (Pearlman & Saakvitne, 1995; Salston & Figley, 2003).

Researchers have used various terminology when referring to secondary traumatization phenomena, including “vicarious traumatization” (VT) (McCann & Pearlman, 1990) “secondary traumatic stress” (STS) “compassion fatigue” (CF) (Figley, 1995) and “burnout” (Figley, 1995; Maslach, 1982). There is a lack of conceptual clarity and agreement in the use of these terms. Researchers and reviewers indicate much confusion over them as they overlap and are often used interchangeably in literature (Chouliara, Hutchison & Karatzias, 2009; Devilly, Wright & Varker, 2009; Dunkley & Whelan, 2006; Elwood, Mott, Lohr & Galovski, 2011; Najjar, Davis, Beck-Coon & Doebbeling, 2009; Sabin-Farrell & Turpin, 2003; Versola-Russo, 2005). This adds difficulty in understanding the literature; a view consistent with Najjar, Davis, Beck-Coon and Doebbeling (2009).

Nevertheless, attempts have been made to distinguish between the terms used (Bober & Regehr, 2006; Jenkins & Baird, 2002; Sabin-Farrell, 2003; Salston & Figley, 2003).

There appears to be two distinct theoretical constructs representing the phenomena: STS and VT. Many researchers agree with this distinction (Baird & Kracen, 2006; Chouliara, Hutchison & Karatzias, 2009; Sabin-Farrell & Turpin, 2003) since both models describe adverse consequences of trauma work, but their theoretical foundations are different.

STS focuses on symptomatic changes (Bride, 2004; Figley, 1995) and VT focuses on changes in cognitive schemas, meaning and belief systems, although acknowledges the presence of symptomatic changes (McCann & Pearlman, 1990). STS is considered to be synonymous with CF (Figley, 1995) and it is argued that STS can also be referred to as CF (Bride, Radey & Figley, 2007; Figley, 1995, 1999). Also, many indicate that STS was formerly known as CF (e.g. Chouliara, Hutchison & Karatzias, 2009; Devilly et al., 2009).<sup>1</sup> Burnout is not a specific consequence of trauma work (Jenkins & Baird, 2002; Sabin-Farrell & Turpin, 2003; Salston & Figley, 2003) but involves a gradual process of apathy, emotional exhaustion, depersonalization and decline in personal accomplishment due to demanding and stressful work (Figley, 1995; Maslach, 1982).

Much literature about secondary traumatization (particularly VT) is narrative and from a theoretical or therapy/practitioner observer position. However, from the available empirical research among mental health professionals, constructs of STS and VT are contentious since evidence to support them is limited and has been referred to as ambiguous and inconsistent (Sabin-Farrell & Turpin, 2003)<sup>2</sup>, mixed (Bride, 2004) and the existence of secondary traumatization phenomena has been questioned (Devilly et al., 2009; Kadambi & Ennis, 2004). In their comprehensive review, Sabin-Farrell and

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<sup>1</sup> This review will use the term STS

<sup>2</sup> In a recent review by Elwood, Mott, Lohr and Galovski (2011) similar conclusions were drawn. The present review was conducted before their review was published. It should be highlighted that their review aims were broader than the present review.

Turpin (2003) suggested that the symptomatic changes were more evident compared to disrupted beliefs. This is indicative of more support for STS compared to VT.

Given the confusion and overlapping nature of STS and VT, and lack of consensus in the field on the evidence base, the first section of this paper will describe models of STS and VT and briefly how the constructs are typically measured. It will also relate these constructs to the diagnosis of PTSD, which is a frequent consequence of *direct* exposure to trauma. The second section aims to review the current status of STS and VT, by reassessing the evidence for these constructs by evaluating recent empirical findings, to establish whether this evidence supports STS and/or VT. Studies published since Sabin-Farrell and Turpin's (2003) review will be evaluated.

## **2. Secondary traumatization theories and PTSD**

### **2.1. Theoretical model of STS**

Figley (1995, 1999) proposed STS 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 person or suffering person” (p.7). STS is not underpinned by a psychological theory, but derives from observations on symptom patterns emerging from secondary exposure to others' trauma within caring/helping relationships. STS involves three symptomatic domains, similar to PTSD, including intrusion (re-experiencing), avoidance (behavioural, cognitive or dissociative) and arousal (Bride, 2004; Figley, 1995; Wilson & Thomas 2004).

Onset of STS can be immediate and develop from a single experience of secondary exposure to trauma (Figley, 1995). It is postulated the amount of exposure to indirect trauma is related to the degree of STS (Figley, 1995) which represents a dose-response

model. This is similar to the VT model (as described later). In summary, the STS model proposes that the development of trauma symptoms arise from indirect exposure to trauma. In contrast to VT, STS does not specifically consider disrupted beliefs, but places emphasis on the emergence of trauma symptoms.

### *2.1.1. Measurement of STS*

Researchers have used self-report measures specifically designed for STS or used established self-report measures of PTSD symptoms. Measures assess the degree/level of trauma symptoms. The most common measures include: the Impact of Events Scale (IES: Horowitz, Wilner & Alvarez, 1979); a standard PTSD symptom measure comprising intrusion and avoidance subscales. The Compassion Satisfaction/Fatigue Self Test for Helpers (CFST; Figley & Stamm, 1996) and its current revision called Profession Quality of Life Scale (ProQOL; Stamm, 2009) which measure CF/STS, but also comprise burnout and compassion satisfaction subscales. Most recently, the Secondary Traumatic Stress Scale (STSS: Bride, Robinson, Yegidis & Figley, 2004) was specifically developed in line with the STS model.

Some criticise the appropriateness/validity of the IES (e.g. Bride et al., 2004; Elwood et al., 2011; Jenkins & Baird, 2002; Kadambi & Trustcott, 2004; Sabin-Farrell & Turpin, 2003). Scores on the IES have been found to highly correlate with burnout measures (Kadambi & Trustcott, 2004). This overlap raises concerns about the uniqueness of STS as a construct to trauma work. Also questioned is whether the IES is applicable for measuring STS, since it was designed for individuals directly exposed to trauma and not validated on samples who have been indirectly exposed to client trauma (Bride, Robinson, Yegidis & Figley, 2004). Some researchers have amended the instructions to direct participants to complete in relation to their client traumas (e.g. Sabin-Farrell,

2000). It appears that the STSS, in particular, overcomes these problems. Furthermore, it is more specific to the STS model compared to the CFST and ProQOL. In addition, it has normative data (Bride, 2007).

## **2.2. Theoretical model of VT**

McCann and Pearlman (1990) originally introduced VT and it was further conceptualised by Pearlman and Saakvitne (1995) as a process “through which the therapists’ inner experience is negatively transformed through empathic engagement with clients’ trauma material” (p.279). This negative transformation of the self involves a gradual, progressive, pervasive and lasting process of disruption in beliefs (cognitive schemata); negatively changing how one experiences, interprets and perceives the self, others and world (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). The process is considered a normal response to trauma work and develops from cumulative exposure to clients’ trauma narratives (Pearlman & Saakvitne, 1995). This suggests the greater the vicarious exposure to trauma the greater the risk and degree of VT.

Social-cognitive trauma theories focusing on beliefs/schemas have been influential in explaining VT. Unlike STS, VT is underpinned by a psychological theory. McCann and Pearlman (1990) refer to VT as being underpinned by their Constructivist Self Development Theory (CSDT) which integrates psychoanalytic and cognitive-developmental learning theories to propose areas of the self which are affected by disrupted beliefs following vicarious exposure to client trauma. This stems from Janoff-Bulman’s (1985, 1992) trauma theory of shattered assumptions, proposing that trauma serves to shatter key assumptions or beliefs about an individual’s sense of safety in relation to the self and the world. These theories essentially reflect schema processes of

unsuccessful integration, assimilation and accommodation (Brewin, Dalgleish & Joseph, 1996; Horowitz, 1986; Piaget, 1971).

McCann and Pearlman (1990) propose that therapists' cognitive schemas (developed and shaped over their lifetime, enabling them to apply meaning, understand the world and interpret life experiences) change as a result of learning about traumatic information from client narratives. The traumatic information may not fit with their schemas, resulting in their own disrupted schemas. Components of the self (including frame of reference, self capacities, ego resources, psychological needs and related cognitive schemas, memory and perception) undergo disruptions – referred to as disrupted beliefs (Pearlman & Saakvitne, 1995; Saakvitne & Pearlman, 1996). Disrupted beliefs in areas of psychological need, in relation to self and others, involve five main areas, including safety, trust, esteem, control and intimacy. Pearlman and Saakvitne (1995) argue these needs are most vulnerable to disruption and can affect spirituality (particularly meaning and hope), elicit cynicism, emotional numbing, withdrawal, distancing, denial and dissociation (McCann & Pearlman, 1990). Clinicians may also experience avoidance, sensory disruptions in memory systems such as flashbacks, intrusive thoughts or images and hyperarousal, which parallel PTSD symptoms (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Additionally, the CSDT describes adaptation to the impact of trauma as being related to an interaction between the individual and their situation within a social and cultural context (Pearlman & Saakvitne, 1995). In summary, the VT model proposes that the development of disrupted beliefs and trauma symptoms develop from indirect exposure to client trauma, but places central emphasis on disrupted beliefs.



### *2.2.1. Measurement of VT*

Self-report measures that have been used to assess VT include The Traumatic Stress Institute Belief Scale (TSIBS; Pearlman, 1996), and its revisions, with the most updated version, providing normative data, called The Trauma Attachment and Belief Scale (TABS; Pearlman, 2003). These assess the degree of disrupted beliefs in areas of psychological need outlined in the model. These measures, however, are limited since they lack assessment of trauma symptoms also outlined in the model. Also, scores on the TSIBS have been found to highly correlate with burnout (Kadambi & Trustcott, 2004) and general distress measures (Jenkins & Baird, 2002). Similarly to concerns raised for the measurement of STS, this overlap raises questions about the uniqueness of VT as a construct to trauma work.

### **2.3. PTSD and its relationship with STS and VT**

Core defining criteria for PTSD in the DSM-IV-TR for Criterion A states: “The person has been exposed to a traumatic event in which both of the following have been present: (1) the person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or threat to the physical integrity of oneself or others (2) the person’s response involves intense fear, helplessness or horror.” (APA, 2000, p. 463). Observable symptoms from three symptom clusters include intrusive recollections, avoidance/numbing and hyper-arousal. Considering PTSD here generally refers to an individual being directly exposed to a traumatic event. This reflects primary traumatization and will be referred to as the ‘diagnostic/rigorous approach’ to PTSD. This is therefore not applicable to mental health professionals listening to client trauma narratives as they are not directly exposed to their clients’ actual traumatic events nor are they typically threatened or injured by these in therapy.

Boundaries and construct validity of PTSD are controversial, particularly due to expansion of the definition of Criterion A from former DSM editions, referred to as the ‘criterion creep’ (Rosen & Lilienfeld, 2008; Rosen, Spitzer & McHugh, 2008). Some may consider the development of PTSD more loosely, since in the accompanying text to the DSM-IV TR (APA, 2000, p.463) it is acknowledged that PTSD *may* develop from “learning about an unexpected or violent death, serious harm or threat of death or injury experienced by a family member or other close associate”. This stretches diagnostic limits of PTSD and hence will be referred to as the ‘loose approach’ to PTSD. By viewing PTSD in this way it may be possible to use the term PTSD to depict the adverse effects of working with traumatized clients. However, ‘learning about’ traumatic events is not explicitly stated in PTSD diagnostic criteria, which can therefore add confusion. Certainly, some argue that criterion A should be more restrictive to explicitly specify that individuals need to directly experience the traumatic events (outlined in a review by Rosen & Lilienfeld, 2008). STS and VT models are specific, in that, indirect exposure to trauma (‘learning about’) is a necessary condition for its development. It could be argued that they are particular forms of PTSD, which questions whether another construct is needed to describe adverse effects of trauma work. However, STS and VT theorists conceptualise these terms in relation to helping relationships (largely clinician-client based), whereas PTSD focuses on the individual, family member and/or close associate. Moreover, if the more restricted or ‘diagnostic/rigorous approach’ to PTSD (with Criterion A) is adopted, indirect exposure through trauma narratives ought not to receive a PTSD diagnosis.

Contemporary psychological models of PTSD conceptualise PTSD as a memory disorder, involving disturbances in cognitive memory processing (e.g. Dual

representation theory; Brewin, Dalgleish & Joseph, 1996 and cognitive model of PTSD; Ehlers & Clark, 2000). Logically individuals need to have *experienced* a traumatic event in order to have a traumatic memory of it, but for mental health professionals they *learn* about their client traumas as opposed to experience them. Through adopting the ‘diagnostic/rigorous approach’ to PTSD, it seems inappropriate to class VT and STS as PTSD. However, if the ‘loose approach’ was adopted, the constructs could be classed as PTSD, and perhaps contemporary theories of PTSD could be applicable. For example, mental health professionals may have created their own trauma memories through listening to their client trauma narratives resulting in trauma symptomatology. However, it appears that secondary traumatization researchers have not adopted such theories. Additionally, the disrupted beliefs emphasised in VT are not explicitly part of PTSD diagnostic criteria (but may come under ‘associated features’ of PTSD) and are also not explained in contemporary PTSD models. Ehler and Clark’s (2000) PTSD model, for example, acknowledges changes in beliefs, but the cognitive-affective reactions outlined are qualitatively different to the proposed deeper schematic changes in meaning emphasised in VT.

In summary, STS, VT and PTSD overlap and essentially refer to the same phenomenon, with exposure to trauma as the common experience. However, in comparison to PTSD, the DSM-IV-TR does not include STS and VT, thus are not formal diagnoses. Moreover, criterion A for PTSD strictly requires direct exposure to trauma. Therapists’ indirect exposure through stories of trauma does not meet Criterion A for PTSD. For these reasons, this review will use the terms STS and VT, but not PTSD to describe the negative impact on mental health professionals indirectly exposed to client traumas. Moreover, researchers in the field do not refer to, describe or conceptualise the negative

effects of indirect trauma exposure as PTSD. Table 1 provides an overview and comparison of PTSD, STS and VT.

Table 1

*Contrasts between PTSD, STS and VT*

	PTSD	STS	VT
Diagnosis?	Yes	No	No
Origins	Exposure to a traumatic event (experienced, witnessed or confronted with)(Criterion A1).  Response involves intense fear, helplessness or horror (Criterion A2).	Secondary (indirect) exposure to others' traumatic events, through a caring/helping relationship (the learning about others' trauma).  Response not specified.	Cumulative vicarious (indirect) exposure to clients' trauma material (the learning about others' trauma).  Response not specified.
Course	Onset can be sudden or delayed following exposure to a traumatic event. Duration of symptoms more than 1 month (Criterion E) and causes clinical significant distress/impairment in social, occupational, or other important areas of functioning (Criterion F).	No particular course or duration specified; may develop from single or several indirect exposures to trauma, but onset can be immediate.	No particular course or duration specified; may develop from a few or several indirect exposures to trauma, but progressive, pervasive and develops overtime.
Outcome	Collection of observable symptom clusters: intrusion, avoidance, hyperarousal (Criterion B, C and D).	Parallel symptoms to PTSD (subclinical PTSD symptoms): intrusion, avoidance, arousal.	Disruptions in beliefs (in relation to self, others and world). Also can have subclinical symptoms parallel to PTSD.

*Note.* PTSD (APA, 2000), STS (Figley, 1995) VT (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995)

### **3. Review of evidence relating to STS and VT**

This section seeks to establish the current status of STS and VT by reviewing empirical findings for mental health professionals, subsequent to Sabin-Farrell and Turpin's (2003) review. Specifically, the aim is to establish whether proposed theoretical constructs of STS and/or VT are supported by current empirical evidence. In order to assess this, the presence and strength of the relationship between indirect exposure to client trauma (through working with traumatized clients) and disrupted beliefs and/or trauma symptoms will be explored.

#### **3.1. Method**

##### *Search strategy*

The search for papers was restricted to papers written in English and published in peer-reviewed journals between 2003-2011. The following databases were searched as their scope comprised the relevant literature in the field: PsychINFO, Medline, Nursing Index via Ovidsp, Social Care Online, PILOTS and Google Scholar. The same free-text search terms used by Sabin-Farrell and Turpin (2003) were used<sup>3</sup>, with the addition of spelling variations recognised in the literature. No other terms have evolved in the literature since then. Search terms for key words were: '*vicarious trauma*' or '*vicarious traumatization*' or '*vicarious traumatisation*' or '*secondary trauma*' or '*secondary traumatic stress*' or '*secondary traumatization*' or '*secondary traumatisation*' or '*compassion fatigue*' or '*trauma work*'. These were screened for in titles and abstracts of papers.

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<sup>3</sup> Some secondary traumatization reviewers have reported their search strategies; search terms for the present review were consistent with Bride (2004) and reviews focusing on alternative/specific samples (Chouliara, Hutchison & Karatzias, 2009; Sinclair & Hamill, 2007). Researchers in the field do not typically use PTSD as a search term.

Inclusion and exclusion criteria were applied to ensure the appropriate body of literature was under review. Inclusion criteria:

- Studies with mental health professionals working with traumatized clients, including those working with sexual offenders, as these clients frequently have histories of trauma (Dhawan & Marshall, 1996; Strickland, 2008).
- Quantitative empirical studies (in order to assess STS and VT models) which constitute a measure of indirect exposure to client trauma and a measure of trauma symptoms and/or disrupted beliefs.

Exclusion criteria<sup>4</sup>:

- Studies focusing solely on health professionals who may come across traumatized clients (e.g. hospice workers, oncology nurses) but only specifically work with end of life issues or serious illnesses.
- Studies focusing solely on specialist military mental health workers.
- Studies focusing solely on mental health workers responding to catastrophic events (e.g. terrorism, war), who are likely to be exposed directly to trauma.

### **3.2. Results**

The search yielded 1,074 records. After duplicates<sup>5</sup> were removed, a total of 278 records were screened, of which, 261 were excluded for not meeting criteria for this review (as defined above). The exclusions included anecdotal/non-empirical discussion/descriptive/review/personal narrative papers, dissertation abstracts and qualitative studies. This left a total of 17 papers which met criteria for this review.

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<sup>4</sup> In order to make the review manageable, other specific, but related professional groups were omitted. VT in particular arose from psychotherapy, with a focus on impact of working with sexual abuse. Therefore the focus of this review (consistent with former reviews, e.g. Sabin-Farrell, 2003) is on mental health professionals working therapeutically. Although much PTSD research has been conducted with military and disaster victims, many interventions have been based on group or population-based strategies. Hence, the indirect impact on therapists has been less of a focus. In contrast, secondary traumatization studies with mental health professionals have tended to focus more on one-to-one therapy and the personal impact upon the therapist.

<sup>5</sup> identical papers across databases.

Studies are broadly ordered in relation to methodological quality. Each study is associated with methodological strengths and limitations, which is appraised (with appendix E summarising). Tables 2 summarises the details of studies in relation to the samples, measures and findings. Regardless of the terms used in individual papers, the table classifies studies identified by their theoretical focus, based on outcome measures utilised. These are categorised as ‘STS studies’ and ‘VT studies’. Studies were evaluated through systematic appraisal of their methods and results. To facilitate this, critical appraisal followed guidelines from the Critical Appraisal Skills Programme (CASP) (2006) and the STROBE Statement – Checklist of items for cross-sectional studies (Vandenbroucke et al., 2007). Appraisal focused on validity and reliability of methods and results:

- Sample (representativeness, size)
- Statistical strength or size of any relationship between indirect exposure to client trauma and trauma symptoms/disrupted beliefs
- Pertinent confounding factors controlled for in design and analysis
- Reliability and validity of outcome measures and measurement of indirect exposure to client trauma

Various approaches have been adopted to assess the amount of indirect exposure to client trauma. There seems to be two main approaches: (i) length of time in trauma work (e.g. number of years/amount of experience in trauma work). These appear to represent more general levels of exposure and possibly confounded by extraneous factors over time. They also represent more longer-term exposure. (ii) Caseload of traumatized clients or amount of time spent working with traumatized clients (e.g. percentage of traumatized/PTSD clients on caseload or number of hours spent working with

traumatized clients). These are more specific measures, which may be more appropriate in the assessment of STS and VT models.<sup>6</sup>

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<sup>6</sup> Since many studies used more than one type of measure of indirect exposure to client trauma, it was not viable to order/categorise studies from this perspective.



Table 2  
*Studies reviewed*

Authors	Sample	Outcome measure	Measure of indirect exposure to client trauma	Findings
<b><i>STS studies</i></b>				
Deighton, Gurriss & Traue (2007)	Trauma therapists $N=100$ (Germany, Austria & Switzerland), 34 males, 65 females, 1 unspecified, age unknown, 55.4% response rate.	1.ProQOL 2.Developed distress scales (including PTSD-related symptoms).	1.Number of clients seen per week. 2.Years of experience as a trauma therapist.	Number of clients seen per week correlated with CF scores ( $r = .41$ ) and distress scale scores, including PTSD-related symptoms ( $r \geq .28$ , $r \leq .36$ ). No correlation between years of experience as a trauma therapist and CF scores or distress scale scores.
Badger, Royse & Craig (2008)	Hospital social workers employed in trauma centres $N=121$ (location unclear), gender & age unknown, 73% response rate.	STSS	Years of experience in hospital social work	No correlation between years of experience in hospital social work and STSS scores.
Bride, Jones & MacMaster (2007)	Child protective service workers $N=187$ (USA), 83% female, 17% male, mean age 37, 56 % response rate.	STSS	Size of caseload.	Size of caseload correlated with STSS scores ( $r = .17$ ).
Ennis & Horne (2003)	Sex offender therapists $N=59$ (USA & Canada), 28 male, 31 female, 36% response rate.	Two scales from LASC: psychological distress & adjustment problems; PTSD-specific symptoms.	Number of hours working with sex offenders.	Number of hours spent working with sex offenders was not a predictor of general psychological distress and PTSD symptoms.
Nelson-Gardell & Harris (2003)	Child welfare agency workers $n = 98$ , 25% response rate. Social worker conference attendees $n = 68$ , 80% response rate. Total $N=166$ (USA), mean age 40.42, 86.7% female, 13.3% male.	CFST	Years of experience in field as a child welfare worker.	Years of experience in field as a child welfare worker did not correlate with and was not a predictor of CF scores.
Sprang, Clark and Whitt-Woosley (2007)	Mental health providers $N=1,121$ (USA), 69.6% female, 30.4% male, average age 45.22, 19.5% response rate	ProQOL	Percentage of clients with PTSD in caseload.	Percentage of PTSD clients on caseload was a predictor of CF scores ( $\beta = .14$ ).

(continued on next page)

Way, VanDeusen, Martln, Applegate and Jandle (2004)	Sex offender therapists $n = 252$ & therapists working with survivors of sexual abuse $n = 95$ . Total $N = 347$ , 40% male, 60% female, mean age 45.6 (USA), 33% response rate.	IES	Length of time providing sexual abuse treatment.	Length of time providing sexual abuse treatment was an inverse predictor of intrusion symptoms for therapists working with survivors of sexual abuse (explains 8.3% of the variability with other predictors in model).
Adams & Riggs (2008)	Clinical & counselling psychology graduates (trainee therapists) $N = 129$ (USA), 83.7% female, mean age 31.21, 36.3% response rate.	Trauma symptom inventory; TSI (five subscales to represent trauma symptomatology).	Amount of applied experience working with trauma clients (in relation to semesters).	Amount of applied experience of working with trauma clients was related to TSI scores; trainees with less applied experience (two or less semesters) of working with traumatized clients reported higher levels of TSI scores on a subscale.
<b><i>VT studies</i></b>				
Way, Vandeusen & Cottrell (2007)	Clinicians providing sexual abuse treatment, total $N = 383$ (USA). Sexual offenders $n = 252$ & sexual abuse survivors $n = 113$ , male 150, female 233, average age 46, 33% response rate.	Two subscales from TSIBS-RL (self-esteem and self-intimacy).	Length of time providing sexual abuse treatment.	Length of time providing sexual abuse treatment correlated with self-intimacy scores.
Cunningham (2003)	Social workers, $N = 182$ (USA), 82% female, 18% male, mean age 45.5, 59.9% response rate.	TSIBS-RL	1. Percentage of trauma cases (sexual abuse or cancer) in caseload. 2. Number of years in (trauma) speciality.	Percentage of sexual abuse cases did not correlate with TSIBS scores. Percentage of cancer cases inversely correlated with TSIBS scores (self-safety, $r = -.13$ & other-safety, $r = -.14$ ). Number of years in trauma speciality inversely correlated with TSIBS scores (self-safety, $r = -.17$ & other-esteem, $r = -.14$ ) and also TSIBS total score ( $r = -.23$ ).
Vandeusen & Way (2006)	Clinicians working with sexual offenders $n = 270$ & sexual abuse survivors $n = 113$ . Total $N = 383$ (USA), 61% female, 39% male, mean age 45.9, 23.3 % response rate.	Two subscales of TSIBS-RL (trust of and intimacy with others).	Length of time providing sexual abuse treatment.	Time providing sexual abuse treatment contributed to variability in TSIBS subscale scores. Together with other factors it accounted for 2-6% of variability among the survivor group and 2-9% among the sex offender group.
Robinson, Clements and Land (2003)	Psychiatric nurses, $N = 295$ (Canada) 79% female, 20.2% male, most aged 41-45 (22.3%), 29% response rate.	TSIBS-RL	1. Percentage of clients in caseload that had trauma issues. 2. Hours spent working on trauma issues.	Percentage of trauma caseload and hours spent working with trauma was not a predictor of TSIBS scores.

Kadambi & Trustcott (2003)	Therapists working with sex offenders $N = 91$ (Canada), 49 women, 42 men, mean age 41, 43% response rate.	TSIBS-RL	<ol style="list-style-type: none"> <li>1. Comparing sample with general mental health professional criterion reference group.</li> <li>2. Perceived exposure to trauma</li> <li>3. Amount of professional time spent working with sex offenders</li> </ol>	No difference in TSIBS scores between sex offender therapists and criterion reference group of mental health professionals. Perceived exposure to trauma and amount of professional time working with sex offenders were not predictors of TSIBS scores.
Bober & Regehr (2006)	Clinicians working in programs that are specialized in work with victims of violence $N = 259$ (Canada), 80.7% female, 19.3% male, mean age 41.3, 45% response rate.	IES TSIBS	Hours per week spent counselling traumatized clients	Hours per week spent counselling traumatized clients correlated with IES scores ( $r = .31$ ). No correlation with TSIBS scores. Hours per week spent counselling traumatized clients was the only predictor of IES scores ( $F = 11.46$ , explained 7% of total variance).
McLean, Wade & Encel (2003)	Mental health professionals working with trauma clients, $N = 116$ (Australia), 73% female, 27% male, no mean age reported, 61% response rate.	TSI Revision M IES	Percentage of time spent in clinical work with clients.	The greater the percentage of time in clinical work related only to higher avoidance symptoms on IES ( $R$ square = .32).
Kadambi & Trustcott (2004)	Three groups of mental health professionals total surveyed $N = 221$ (Canada & USA), working with clients who have suffered sexual violence $n = 86$ , cancer $n = 64$ and clinicians in general practice $n = 71$ , 186 women, 35 men, mean age 42, 35% response rate.	TSI Revision M IES	<ol style="list-style-type: none"> <li>1. Comparing mental health professional groups.</li> <li>2. Amount of exposure to human cruelty (Likert scale ratings from none to profound amounts)</li> </ol>	No significant differences between groups on TSI scores or IES scores. Amount of exposure to human cruelty was not a predictor of IES or TSI scores (for whole sample).
Deville, Wright & Varker (2009)	Mental health professionals $N = 152$ (Australia), overall response rate = unobtainable	STSS TSIBS-RL	<ol style="list-style-type: none"> <li>1. Trauma client caseload (proportion of caseload dedicated to working with traumatized clients).</li> <li>2. Comparing mental health professionals treating trauma clients to control group of non-trauma therapists.</li> <li>3. Hours worked per week with traumatized clients.</li> </ol>	Trauma client caseload correlated with STSS scores ( $r = .19$ ) and TSIBS scores ( $r = .24$ ). Caseload was a significant predictor of STSS scores ( $\beta = .24$ ), but not TSIBS scores. No significant differences in STSS or TSIBS scores for those with higher exposure to trauma compared to those with lower exposure. Hours working with traumatized clients per week was not a predictor of STSS scores.

*Note.* Abbreviation key: CF = compassion fatigue subscale scores, LASC = The Los Angeles Symptom Checklist, IES = Impact of Event Scale, ProQOL = The Professional Quality of Life Scale, CFST = The Compassion Fatigue Self Test for practitioners, STSS = The Secondary Traumatic Stress Scale, TSI = The Trauma Symptom Inventory, TSIBS-RL = The Traumatic Stress Institute Belief Scale, Revision-L, TSI Revision M = The Traumatic Stress Institute Belief Scale, Revision-M.

### *3.2.1. STS studies*

This section seeks to determine whether the construct of STS is supported. Eight studies were identified, using outcome measures representative of trauma symptomatology.

These will be evaluated in turn.

Deighton et al. (2007) found no correlation between years of experience as a trauma therapist and CF scores or distress scale scores. Nevertheless, using a more specific and thus stronger measure of indirect exposure to client trauma, number of clients seen per week correlated with outcome measures. This finding indicates support for STS. A limitation was that the constructed distress scales were not validated outcome measures, therefore findings in relation to these scales should be treated with caution.

Strengths of the next two studies include the use of the STSS; a validated STS model specific measure. However, both studies lack adequate evidence to support STS. Badger et al. (2008) found no correlation between years of experience in hospital social work (among individuals working in trauma centres) and STSS scores. A strength of the study includes the high response rate (73%) increasing the representativeness of the sample. However, it is arguable whether 'years of experience in hospital social work' is specific enough to constitute an accurate measure of indirect exposure to trauma work, despite researchers making reference to the professional role involving routine exposure to traumatized clients. This measure is similar to the less specific, but longer-term exposure measure used by Deighton et al. (2007).

Bride et al. (2007) found caseload size correlated with STSS scores. However, while results indicate support for STS, it remains unclear whether size of caseload comprised solely of traumatized clients. This makes it difficult to determine whether greater

exposure to indirect trauma or a greater caseload in general related to greater trauma symptoms. Additionally, the correlation was relatively weak ( $r = .17$ ).

All three studies are further weakened by restricting analyses to bivariate correlations. Results are unable to delineate the unique variability in trauma symptomatology accounted for by indirect exposure to client trauma. Certainly, all three studies found other factors that significantly related to trauma symptoms (including personal history of trauma, experience as a mental health professional not specific to trauma work, support from others, desire to leave the field, having a low degree of working through trauma with clients, occupational stress). Stronger conclusions could be made about the unique effect of indirect exposure to trauma on trauma symptomatology, if such possible confounding factors were controlled for, for example, through appropriate multiple regression analysis.

The next five studies are methodologically stronger, since analysis of the relationship between indirect exposure to client trauma and trauma symptoms was statistically assessed with other factors. Ennis and Horne (2003) found number of hours spent working with sex offenders was not a predictor of scale scores comprising psychological distress and adjustment problems or PTSD specific symptoms. A strength of the study included the exploration of the influence of personal history of trauma; no significant effects of personal history of trauma were found. However, it is possible that analysis lacked sufficient power to detect a significant relationship due to the small sample size ( $n = 59$ ). In relation to the outcome measures, psychometric properties were not reported, which raises concerns for their validity and reliability. Arguably, the assessment of indirect exposure to trauma lacked precision as not all sex offenders may have experienced trauma.

The next two studies used CF measures and strengths of these studies included the exploration of possible differences among the varying professional groups in their samples. Nelson-Gardell and Harris (2003) found years of experience in field as a child welfare worker neither correlated with or was a predictor of CF scores. This finding is similar to Badger et al. (2008), Deighton et al. (2007) and Ennis and Horne (2003). However, consistent with these studies, the measure of indirect exposure to client trauma is general, and therefore relatively weak. While child welfare workers predominantly work with abuse, they also work with neglect issues. It is arguable whether neglect represents trauma, thus the measure arguably lacks precision. Also, weakening the findings is that the sample participated in a training program on STS, giving rise to possible biases and limiting the generalisability of findings.

Sprang et al. (2007) used a stronger measure of indirect exposure to client trauma and found percentage of PTSD clients in caseload was a predictor of CF scores. This finding indicates support for STS and is consistent with Deighton et al. (2007). However, the strength of the relationship is relatively weak ( $\beta = .14$ ) comparatively to other variables (e.g. gender  $\beta = .85$ ). A strength of the study is the extensive sample size ( $n = 1,121$ ), though a weakness is the relatively low response rate (19.5%), which raises concerns of selection bias; affecting representativeness of the sample. Another limitation is that participants with specialised trauma-specific training had significantly lower CF scores than those with non-specialised training, but this was not controlled for in analysis, which may have confounded the results.

Findings from the next two studies appear contradictory to the STS model. Way et al. (2004) found length of time providing sexual abuse treatment as an inverse predictor of

intrusion symptoms (on the IES) amongst therapists working with survivors of sexual abuse. This suggests that shorter lengths of time providing sexual abuse treatment related to greater levels of intrusion symptoms. No significant relationships were found for sex offender therapists. Similarly, findings by Adams and Riggs (2008) indicated that having less applied experience of working with trauma clients among trainee therapists was associated with greater levels of trauma symptoms (on one subscale of the TSI). Again, both studies are weakened as their measures of indirect exposure to client trauma lacked specificity. It is unclear whether these measures would, for example, include the amount of trauma caseloads. A strength of Adams & Riggs' (2008) study includes exploring and controlling for demographic confounding variables and exploring for interaction effects between defense style (coping style in relation to defense mechanisms) and applied experience of working with trauma clients. With regards to studies by Adams and Riggs (2008) and Way et al. (2004) it is possible that there may be an adaptation process, whereby less experience in trauma work may mean that individuals have less developed ways of coping with trauma work.

These last three studies share similar methodological weaknesses since researchers fail to indicate whether participants were instructed to complete the (non-STS specific) outcome measures in relation to their clinical/trauma work. This raises concerns about the assessment of trauma symptoms since it is possible that therapists' personal trauma experiences might confound indirect client trauma effects. These measures were constructed for direct trauma experiences and have not been validated on indirectly exposed traumatized individuals. It is questionable whether these measures are sensitive enough to be used on clinicians who are indirectly exposed to client trauma.

### 3.2.2. *Summary*

Studies limited to bivariate correlation analyses (Badger et al., 2008; Bride et al., 2007; Deighton et al., 2007) are considered to be the weakest in this section. From these studies, only one study (Deighton et al. 2007) shows evidence for STS; evidence from the other studies are problematic due to methodological difficulties. The remainder of studies, using multivariate analyses, also suffer from methodological limitations. From these, only Sprang et al. (2007) shows evidence to support STS. However, neither Sprang et al. (2007) or Deighton et al. (2007) use the STSS to measure levels of trauma symptoms, which is considered to be a methodologically stronger outcome measure of symptoms specific to the STS model. Only two studies include the STSS (Badger et al., 2008; Bride et al., 2007) but these are methodologically weak.

A majority of studies fail to reveal significant positive relationships between indirect exposure to client trauma and trauma symptoms (Adams & Riggs, 2008; Badger et al., 2008; Bride et al. 2007; Deighton et al., 2007<sup>7</sup>; Ennis & Horne, 2003; Nelson-Gardell & Harris, 2003; Way et al., 2004). However, all these studies used less precise, more general or longer-term indirect exposure to client trauma measures. From those studies that used more specific exposure measures (e.g. caseload of traumatized clients), significant positive relationships with trauma symptoms were found, indicating support for STS (Deighton et al. 2007; Sprang et al. 2007).

### 3.2.3. *VT studies*

This section seeks to determine whether the construct of VT is supported. Nine studies were identified, which used outcome measures representative of disrupted beliefs alone or in combination with trauma symptomatology. These will be evaluated in turn.

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<sup>7</sup> Deighton et al. (2007) is referenced twice as this study included two measures of indirect exposure to client trauma, one specific and the other more general/longer-term.



The first five studies used the TSIBS-RL to assess disrupted beliefs. This measure specifically assesses the central component of VT. Way et al. (2007) found length of time providing sexual abuse treatment correlated only with self-intimacy scores. While this finding appears to indicate support for VT, in relation to this particular schema/belief area, it is unclear whether the measure of indirect exposure to client trauma would suggest that clinicians had greater sexual abuse caseloads or merely a greater number of years or experience in that particular job role. Further methodological weaknesses include the lack of sufficient statistical information to determine the strength of the relationship and restricting analyses to two subscales of the TSIBS-RL, thus limiting the findings.

Cunningham (2003) compared two types of trauma and hypothesised that clinicians working with sexually abused clients would report more disrupted beliefs than those working with clients with cancer. Using a more specific measure of indirect exposure to client trauma, in comparison to Way et al. (2007), Cunningham (2003) found that percentage of sexual abuse cases did not correlate with TSIBS scores. Therefore, findings do not support VT for this particular type of trauma exposure. The percentage of cancer cases inversely correlated with self-safety and other-safety subscale scores. Cunningham (2003) also used a more general/longer-term exposure measure and found years in trauma speciality inversely correlated with self-safety, other-esteem subscales and TSIBS total scores. This finding indicates that more time working in the trauma field related to lower disrupted beliefs. This suggests a possibility of an adaptation process occurring overtime. However, all correlations were relatively weak ( $r = \geq -.14 \leq -.23$ ). Strengths of the study include the relatively high response rate (59.9 %) and the specification of the time frame (of six months) for clinicians to recall their percentage of trauma cases in caseload, adding clarity and reliability in relation to recall accuracy and

time since indirect exposure to client trauma. It appears all other studies in this section have been vague in reporting time frames, which is problematic. Weaknesses common to both studies include their limited analyses through bivariate correlations.

The remainder of studies in this section were considered methodologically stronger since multivariate analyses were conducted, thus statistically enabling control of potential confounding factors. Vandeusen and Way (2006) found length of time providing sexual abuse treatment, along with other factors (age, gender, personal history of trauma) explained 2-6% of the variability in 'trust of and intimacy with others' subscale scores for clinicians working with survivors of sexual abuse. For clinicians working with sex offenders, 6-9% of the variability in 'trust of and intimacy with others' subscale scores was explained by length of time providing sexual abuse treatment, also along with the other factors. Given the relatively low variance for both clinician groups explained by these factors, this suggests other factors may play a role in contributing to the risk of/adaptability to VT. The authors suggest the findings indicate that a shorter length of time providing sexual abuse treatment related to higher levels of disrupted beliefs (trust of and intimacy with others). This finding is similar to Cunningham (2003). A strength of the study is that gender differences were accounted for and controlled in the regression models. However, methodological concerns include the lack of sufficient statistical details about the regression analysis to extract information regarding the unique contribution (e.g.  $\beta$ ) of indirect exposure to client trauma on TSIBS scores, hence it was not possible to assess the strength of the relationship. Similar to Way et al. (2007), measurement of disrupted beliefs was restricted to two subscales and the measure of indirect trauma exposure was perhaps too general to appropriately assess the VT model.

The next two studies use the full TSIBS-RL scale in analyses. Robinson et al. (2003) found percentage of trauma caseload and hours spent working with trauma was not a predictor of TSIBS scores. These findings do not support VT. Kadambi and Trustcott (2003) found that neither perceived exposure to trauma or amount of professional time working with sex offenders were predictors of TSIBS scores. Additionally, researchers hypothesised that sex offender therapists would comparatively have greater disrupted beliefs to a criterion reference group of mental health professionals. No differences in TSIBI scores were found. While this finding may be indicative of lacking support for VT, similar arguments to previous studies (Vandeusen & Way, 2006; Way et al. 2007) can be applied regarding the lack of specificity in the measure of indirect trauma exposure.

The next four studies are strengthened by their assessment of the relationship with *both* components of VT (disrupted beliefs and trauma symptoms). These studies also included the TSIBS-RL or one of its revisions. All studies employed multivariate analyses and used relatively specific measures of indirect exposure to client trauma. These studies were considered to have greater methodological validity.

Bober and Regehr (2006) found hours per week spent counselling traumatized clients correlated with and was a predictor of IES scores. No relationship was found with TSIBS scores. This suggests the greater number of hours per week spent counselling traumatized clients related to greater levels of trauma symptoms only. However, regression analysis was not conducted with TSIBS scores, due to insufficient participants ( $n=53$ ) completing the TSIBS-RL. Findings are therefore limited, and support STS as opposed to VT. However, several methodological limitations are apparent. There was no indication of whether participants were instructed to complete

the IES in relation to their clinical/trauma work. As discussed in earlier sections, this poses a risk of measuring personal trauma symptoms of the clinician. Researchers did not control for some variables in the regression analysis that were significant at bivariate or univariate level (age, total hours spent providing counselling services). It is possible these factors confounded the results.

The next two studies are strengthened as participants were instructed to complete the IES in relation to their trauma work. McLean et al. (2003) found that greater percentage of time in clinical work was not related to higher TSI (Revision M) scores, but related to higher avoidance symptoms on the IES. Similar to Bober and Regehr (2006), this finding elicits some support for STS, but not VT. A strength of the study includes the relatively high response rate (61%). Also significant differences were found on outcome measures for gender and controlled for in analyses.

Kadambi and Trustcott (2004) found the level of exposure to human cruelty was not a predictor of either IES or TSIBS scores. Additionally, researchers hypothesised that clinicians who worked with clients who had suffered sexual violence or cancer would have higher levels of disrupted beliefs and trauma symptoms compared to those who worked in general practice. No significant differences were found between the professional groups on outcome measures. Therefore findings do not support VT.

A strength of the study is that researchers considered and assessed for potential confounding factors (including personal history of trauma, gender, educational level, length of time in field) and were included as covariates in analyses. A possible limitation was that the 'general practice' group were sampled from university counselling centres, which may not be representative of mainstream general practices.

The next study is methodologically stronger since the STSS was used. Devilly et al. (2009) found the proportion of caseloads dedicated to working with traumatized clients correlated with STSS and TSIBS scores, though correlations were relatively weak ( $r = .19$ ,  $r = .24$  respectively). Researchers also reported caseload as a predictor of STSS scores but not TSIBS scores. However, it is unclear whether 'caseload' within the regression model specifically refers to trauma caseload or caseload in general. Hours working with traumatized clients per week was not found to be a predictor of STSS scores and researchers did not assess this with the TSIBS-RL. Additionally no significant differences on outcome measures were found between those treating trauma clients to a control group of non-trauma therapists. Findings show limited support for VT based on bivariate correlations and no support from other analyses. Strengths of the study include the controlling of confounding variables in analyses (hours worked each week, work stress and personal history of trauma) and specification in the survey of what constitutes trauma work, incorporating the DSM-IV definition of traumatic events. The latter reduces variability, increasing the reliability of findings. However, a weakness is the absence of response rate for their sample, hence discerning the extent of any potential selection bias is problematic.

#### *3.2.4. Summary*

Studies that only assessed disrupted beliefs are considered the weakest in this section, as they lacked measurement of trauma symptoms and thus not capturing the full construct of VT. From these studies, findings from Cunningham (2003) and Way et al. (2007) are further weakened as analyses are limited to bivariate correlations and lack control of possible confounding factors. However, from studies that use relatively specific measures of indirect exposure to client trauma (Cunningham, 2003; Robinson et al., 2003) evidence is not supportive of VT. Studies using more general/longer-term

measures of indirect trauma exposure elicit inconsistent findings (Cunningham, 2003<sup>8</sup>; Kadambi & Trustcott, 2003; Vandeusen & Way, 2006; Way et al. 2007).

Studies that assessed *both* components of VT (disrupted beliefs and trauma symptoms) were considered methodologically stronger. Additionally, all these studies included relatively specific measures of indirect exposure to client trauma. These studies conveyed a major lack of evidence to support VT. Kadambi and Trustcott (2004) found no evidence to support VT. The methodologically strongest study (Devilley et al., 2009) conveys only minimal supportive evidence for VT. Instead, studies appeared to show more evidence to support STS (Bober & Regehr, 2006; Devilly et al., 2009; McLean et al., 2003). While all studies included a disrupted beliefs measure corresponding to the VT model, only one (Devilley et al., 2009) included the STSS to assess the trauma symptomatology component of VT.

### *3.2.5. Other factors that may be associated with VT and STS*

Within PTSD literature, it is acknowledged that factors other than exposure to trauma may also contribute to PTSD (Brewin, Andrews & Valentines, 2000). Secondary traumatization researchers (Figley, 1995; Pearlman & Saakvitne, 1995) have similarly suggested that other factors may also contribute to the development of STS and VT. However, these factors have not yet been established and are not specifically defined in the models. Broadly, individual (e.g. personal history) and situational factors (e.g. work context) have been proposed to influence the vulnerability of developing VT (Pearlman & Saakvitne, 1995).

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<sup>8</sup> Cunningham (2003) is referenced twice as it includes two measures of indirect exposure to client trauma.

Certainly several studies in this review have also investigated the relationship between other factors and trauma symptoms and/or disrupted beliefs, for example age, personal history of trauma, social support, work/occupational stress, trauma-specific training, coping strategies (e.g. Bober & Regehr, 2006; Bride et al. 2007; Cunningham, 2003; Devilly et al. 2009; Sprang et al. 2007; Way et al. 2004). Given that we have yet to clarify the relationship between indirect exposure to client trauma and trauma symptoms and/or disrupted beliefs, these contributing factors will not be reviewed here. Until the literature establishes which construct is most appropriate to describe secondary traumatization phenomena, reviewing the associated factors would be premature.

#### **4. Discussion**

##### *4.1. Conclusion*

Studies under review were appraised to determine whether proposed theoretical constructs of VT or STS are supported by findings among mental health professionals. Each study is associated with particular strengths and weaknesses. Methodological discrepancies and identified limitations make comparison of findings across studies problematic and challenge inferences made. However, tentative conclusions (from studies of higher quality) may be drawn. Despite increasing empirical research, consistent with previous reviews (Bride, 2004; Sabin-Farrell & Turpin, 2003)<sup>9</sup>, evidence for both constructs remains limited and equivocal. Nevertheless, consistent with Sabin-Farrell and Turpin's (2003) review, findings from the present review show little supportive evidence for VT and more supportive evidence for STS. From the eight studies reviewed for STS, two studies (Deighton et al., 2007; Sprang et al., 2007) demonstrated support for STS. However, many of the studies that failed to demonstrate a relationship between indirect trauma exposure and trauma symptoms used more

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<sup>9</sup> Similar conclusions are also drawn by Elwood et al. (2011)

general/longer-term exposure measures (e.g. years of experience in trauma work). From the nine studies reviewed for VT, one study (Devilly et al. 2009) found modest support, but three studies (Bober & Regehr, 2006; Devilly et al., 2009; McLean, 2003) elicited some support for STS. In general, it appears that where studies have used more specific measures of indirect trauma exposure, there is some support for STS.

It seems that some relationships found between indirect exposure to client trauma and trauma symptomatology were relatively weak (i.e. low correlations, explaining low variances). It is possible that other factors relating to exposure, such as the type or intensity of work conducted with traumatized clients may impact on the relationship. The process may be more complex, with other factors unique to the individual or situation also playing a role. Although not reviewed here, several studies found factors other than indirect trauma exposure to relate to levels of trauma symptoms.

The paucity of evidence for VT may be a result of the outcome measures used to assess the degree of disrupted beliefs. These may not be sensitive enough and therefore not 'picking up' the construct of VT sufficiently, since Sabin-Farrell and Turpin (2003) reported some changes in beliefs from studies with qualitative findings. Alternatively, it is possible that mental health professionals' means of coping with the demands of clinical work have the effect of counter-acting the impact of trauma work. Perhaps the impact of trauma work is not dissimilar to other demanding/stressful clinical work.

#### *4.2. Overall methodological issues*

There are several overall methodological concerns within this area of research. All studies under review were cross-sectional and therefore causal inferences cannot be made. Outcomes are based on relationships, which cannot imply causality. Longitudinal



designs would be better able to identify whether indirect exposure to client trauma is a predictor and investigate and identify the process that may be involved in the proposed constructs of STS and VT.

Studies were based on surveys, with largely convenience samples. These are associated with common problems such as responder bias (e.g. social desirability and demand characteristics). Consequently determining the extent of representativeness of samples and generalisability of findings can be problematic. None of the studies were conducted in the U.K and demographics of participants suggest the majority were Caucasian and female. Generalisability of the results to U.K. populations and other ethnic groups is therefore questionable. Some studies comprised varying professional groups, but failed to explore for possible differences (Bober & Regehr, 2006; McLean et al., 2003) which can be problematic.

Consistent with former reviews (e.g. Bride, 2004; Sabin-Farrell & Turpin, 2003) indirect exposure to client trauma, across studies, was assessed in a number of ways and some included more than one method. Attempts to quantify amounts of indirect trauma exposure have relied on self-report and varied considerably. Measurements ranged from relatively specific exposure (e.g. trauma caseloads) which are conceivably more accurate for assessing the models, to exposure over a longer period of time or more general measures (e.g. length of time/experience in trauma work). Few studies incorporated comparison/control groups. These various forms are qualitatively different, with varying time frames, thus make comparisons problematic.

#### *4.3. Recommendations for future research*

This review gives rise to several overarching issues. Methodological problems need to be addressed in future secondary traumatization research, with studies using similar research designs and measures in order to make comparisons and stronger conclusions. Methodological issues included outcome measures of secondary traumatization, indirect exposure to trauma and miscellaneous factors. For example, research needs to include secondary traumatization specific measures that have been validated on populations indirectly exposed to client trauma as it is questionable whether other measures (e.g. personal trauma measures) are sensitive enough to be used on clinicians who are indirectly exposed to client trauma. Specifically in relation to VT, more research is needed to assess both components (trauma symptoms and disrupted beliefs) using the most appropriate measures available (e.g. STSS and TSIBS-RL/TABS) in order to assess the full construct. Only one study included this (Deville et al. 2009).

Studies should specify with more clarity what constitutes trauma work by offering a definition. With exception of Cunningham (2003), researchers did not explicitly define trauma work, therefore adding potential variation in what constitutes trauma, which possibly impacts the validity of measures of indirect trauma exposure. Measurement of amounts of indirect exposure to trauma would benefit from more precision in order to increase recall accuracy. This could include a specified time frame of the period from which participants would be estimating amounts of exposure; perhaps a shorter period would aid recall accuracy. Longer-term exposure is likely to be confounded by extraneous variables.

Studies should consider and control for potential confounding factors (including personal and situational factors) when assessing the relationship between indirect

exposure to trauma and trauma symptoms/disrupted beliefs. Research should explore the relationship in the context of other variables rather than in isolation. This would increase the validity of the findings and enable better evaluation of the models. Studies have generally been selective in the number and type of controls depending on their aims and therefore may have lacked control for potentially important variables such as whether personal history of trauma was resolved, the quality of trauma training and the quality of supervision. It is possible that by incorporating these or other possible pertinent factors in regression models it may help build more comprehensive models of the proposed constructs. Future research may also benefit from using comparison/control groups (Elwood et al. 2011; Kadambi & Trustcott, 2004) to help assess the uniqueness of VT or STS on those that work with trauma.

#### *4.4. Clinical Implications*

Mental health professionals are frequently exposed to client trauma narratives and according to theoretical perspectives this can lead to STS or VT. However, despite more evidence found for STS in this review, this is tentative. This may imply that staff and services should be encouraged to increase awareness of trauma symptoms and seek appropriate support when working with traumatized clients. As symptomatic changes are proposed to mirror PTSD symptoms, perhaps contemporary PTSD theories could be adapted, along with PTSD interventions. However, this would need to be supported by further evidence. Additionally, taking this approach would inevitably add confusion about the distinctions between PTSD and STS.

Findings from this review indicate that overall there is limited consistent/reliable evidence for either STS or VT. Further research is needed to determine the existence of the phenomena as it is currently conceptualised, thus the risks of STS and VT for mental health professionals is unclear. Only with more methodologically sound

evidence validating the constructs can appropriate interventions (e.g. supervision/training) be considered. If the evidence-base remains the same, the constructs may need to be revised or abandoned altogether.

Given the findings from this review, proposing or implementing interventions for STS or VT at this stage would be premature and, as Elwood et al. (2011) highlight, even wasteful of resources. Based on the available evidence from the present review it could be argued that constructs of STS and VT (in particular) are unnecessary and lack usefulness. Elwood et al. (2011) suggest that accepting the existence of secondary traumatization may even be harmful to mental health professionals by sensitising therapists through self-fulfilling prophecy, which could lead to or increase distress levels. This view is similar to literature on psychological debriefing and self-help interventions for individuals exposed to trauma and at risk of PTSD, highlighting the importance of sufficient robust evidence prior to implementing preventive interventions (Rose, Bisson, Churchill & Wessley, 2002). Further methodologically sound research is clearly required.

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## **Section 2: Research report**

### **Indirect Exposure to Client Trauma and the Impact on Trainee Clinical Psychologists: Secondary Traumatic Stress or Vicarious Traumatization?**

## **Indirect Exposure to Client Trauma and the Impact on Trainee Clinical Psychologists: Secondary Traumatic Stress or Vicarious Traumatization?**

### **Abstract**

**Objectives:** The study set out to investigate, among trainee clinical psychologists, the extent of exposure to trauma work and the relationship between exposure to trauma work and well-being (specifically general psychological distress, trauma symptoms and disrupted beliefs). The study also sought to assess the contribution of individual and situational factors on well-being.

**Design:** A web-based survey was employed.

**Method:** The survey comprised the General Health Questionnaire (GHQ-12), Secondary Traumatic Stress Scale (STSS), Trauma and Attachment Belief Scale (TABS), Trauma Screening Questionnaire (TSQ) and specific questions relating to the amount of exposure to trauma work and other individual and situational factors of interest. The link to the online survey was sent via email to trainee clinical psychologists attending courses throughout the U.K.

**Results:** 564 trainee clinical psychologists participated. Most trainees had a caseload of 1-2 trauma cases, with the most common trauma being sexual abuse. Exposure to trauma work was not related to general psychological distress or disrupted beliefs, but was a significant predictor of trauma symptoms. Situational factors contributed to the variance in trauma symptoms; level of stress of clinical work and quality of trauma training were significant predictors of trauma symptoms. Although exposure to trauma work was not related to general psychological distress or disrupted beliefs, some individual and situational factors were found to be significant predictors of general psychological distress and disrupted beliefs.

**Conclusions:** This study provides support for secondary traumatic stress (STS) and lacks evidence to support vicarious traumatization (VT) or a relationship between

exposure to trauma work and general psychological distress. The existence and validity of VT is questioned and clinical and theoretical implications are discussed with suggestions for future research.

## **Introduction**

As a result of the very nature of their work, mental health professionals are frequently exposed to hearing about client traumas. Literature has highlighted the possibility that this indirect exposure to client trauma can have a negative impact on the well-being of mental health professionals. Theoretical constructs of “secondary traumatic stress” (STS) (Figley, 1995) and “Vicarious traumatization” (VT) (McCann & Pearlman, 1990) have been proposed to describe the supposed unique adverse effects of working with traumatized clients. It has been suggested that STS/VT are occupational hazards for those providing services to traumatized clients (Figley, 1999) and that the costs are immeasurable (Pearlman & Saakvitne, 1995).

STS and VT have often been used interchangeably in the literature, which has created confusion (e.g. Chouliara, Hutchison & Karatzias, 2009; Devilly, Wright & Varker, 2009; Dunkley & Whelan, 2006; Sabin-Farrell & Turpin, 2003). However, while it is apparent that there is significant overlap in what models of STS and VT seek to explain, their theoretical foundations are quite different (Baird & Kracen, 2006; Chouliara, Hutchison & Karatzias, 2009; Sabin-Farrell & Turpin, 2003).

### **Theoretical models of VT and STS**

Both models represent a form of secondary traumatization and indirect exposure to trauma (through ‘learning about’ the traumatic experiences of another) is proposed to be the necessary condition for their development. In addition, both models suggest the amount of indirect exposure to trauma is related to the degree of VT/STS (Figley, 1995; Pearlman & Saakvitne, 1995). However, for STS the fundamental feature involves the development of *trauma symptoms* parallel to PTSD (Figley, 1995) following indirect exposure to one or more traumatic events within helping/caring relationships. The



symptomatology comprises intrusion, avoidance and arousal and can develop quickly (Figley, 1995, 1999). In contrast, VT is conceptualised within the Constructivist Self Development Theory (CSDT; McCann and Pearlman, 1990). This combines psychoanalytic and cognitive-developmental learning theories and refers to the idea that the construction of one's own realities occur through the formation of cognitive schemas which have been developed and shaped over the lifetime; enabling one to apply meaning, understand the world and interpret life experiences. The fundamental feature involves the development of trauma related *disrupted beliefs* in relation to the self, others and the world from cumulative exposure to client trauma narratives. The process involves gradual, progressive and lasting changes and the disruptions can include frame of reference, self capacities, ego resources, psychological needs (safety, trust, esteem, control and intimacy) and related cognitive schemas, memory and perception. VT still acknowledges, however, the presence of trauma symptoms that mirror PTSD through disruptions in sensory memory (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Also, the CSDT describes adaptation to the impact of trauma as being related to an interaction between the individual and their situation, within a social and cultural context (Pearlman & Saakvitne, 1995).

### **Research evidence relating to STS and VT**

Researchers exploring STS/VT among mental health professionals have predominantly used surveys, with outcome measures assessing the degree/level of disrupted beliefs and/or trauma symptoms, in relation to indirect exposure to client trauma (e.g. Bride, Jones & MacMaster, 2007; Cunningham, 2003; Pearlman & MacIan, 1995; Schauben & Frazier, 1995). In their review, Sabin-Farrell & Turpin (2003) indicate more evidence for the symptomatic changes, which suggests more support for STS compared to VT. However constructs of STS and VT are contentious as empirical evidence to support

them is limited and argued as unclear/ambiguous and inconsistent/mixed (Bride, 2004; Sabin-Farrell & Turpin, 2003; Elwood, Mott, Lohr & Galovski, 2011). Hence the existence of these proposed theoretical constructs have been questioned (e.g. Devilly et al., 2009; Kadambi & Ennis, 2004). It is possible that the distress experienced is less complex and non-specific and represents general psychological distress. Perhaps the impact of trauma work is the same as the impact of other clinical work that may be distressing or stressful, depicting general psychological distress. Certainly, it is well recognised that mental health workers can experience poor mental health/general psychological distress due to the demanding nature of their work (e.g. as reviewed by Walsh & Walsh, 2001).

Models of STS and VT imply that the development of disrupted beliefs and/or trauma symptoms are unique to those who are exposed to working with traumatized clients. However, Sabin-Farrell and Turpin (2003) indicate the difficulty in determining whether the distress experienced by mental health professionals is related to the stressful and demanding nature of mental health work in general or specifically related to the trauma work itself. Recent findings appear to indicate that greater work or occupational stress is associated with greater trauma symptoms (Deville et al., 2009) and disrupted beliefs (Badger et al. 2008) among mental health professionals. However, it remains unclear how much the potential level of stress of clinical work or even other distressing clinical work contribute to trauma symptoms or disrupted beliefs above and beyond exposure to trauma work.

### **Contributing factors to the development of STS and VT?**

Despite the lack of consistent evidence to support the constructs of STS and VT, researchers have attempted to identify some of the associated factors that may

contribute to the risk of or protection from STS/VT. Broadly, VT theorists propose that individual and situational factors may influence vulnerability/adaptability to developing VT (Pearlman & Saakvitne, 1995). However for STS and VT, associated factors are not explicitly conceptualised in the models. It appears that these are not clearly distinguished in the literature (Bride, 2004; Sabin-Farrell & Turpin, 2003). Some of the more investigated factors (although with mixed findings) include gender (e.g. Nelson-Gardell & Harris, 2003; Sprang, Clark & Whitt-Woosley, 2007) age (e.g. Bober & Regehr, 2006; Nelson-Gardell & Harris, 2003) personal history of trauma (e.g. Jenkins & Baird, 2002; Pearlman & MacIan, 1995), experience as a mental health professional (e.g. Bride, Jones & MacMaster, 2007; Kadambi & Trustcott, 2004;), coping strategies (e.g. Bober & Regehr, 2006; VanDeusen & Way, 2006), support from others (e.g. Bride et al., 2007; Devilly et al., 2009), supervision (e.g. Ennis & Horne, 2003; Kadambi & Trustcott, 2003) and trauma-specific training (e.g. Sprang et al., 2007).

### **Impact of indirect exposure to client trauma among trainee clinical psychologists?**

Although there is limited consistent evidence to support STS and VT with qualified mental health professionals, questions arise about the impact of exposure to trauma work among mental health professionals in training. Given the proposed constructs of STS and VT, there may be potential implications for trainee clinical psychologists as they work therapeutically with clients presenting a range of psychological difficulties during their training, across placements. Trainees are therefore likely to engage in work with traumatized clients, though the extent of exposure to traumatized clients is currently unknown.

Since models of STS and VT indicate that greater indirect exposure to client trauma increases the risk of STS/VT, it is possible that being a trainee itself reduces this risk,

since it is likely that they have had less exposure to working with traumatized clients due to their shorter length of time working clinically, compared to qualified staff. Alternatively, it may be that being a trainee (a novice therapist) may increase vulnerability to secondary traumatization. Some researchers have found evidence indicating that younger age as a mental health professional is associated with greater trauma symptoms/disrupted beliefs (e.g. Bober & Regehr, 2006; Sprang et al., 2007; Way et al., 2004; Way et al., 2007). Also, some researchers have found evidence indicating that less experience as a mental health professional is associated with greater trauma symptoms/disrupted beliefs (e.g. Badger et al., 2008; Kadambi & Trustcott, 2004; McLean et al., 2003; Sprang et al., 2007).

There is only very limited research among trainee psychologists in the area of secondary traumatization; with one published study (Adams & Riggs, 2008) and two doctoral theses (Fama, 2003; Fucci, 2008). Moreover, this research is based in the USA. Fama (2003) conducted a web-based survey among 96 trainee clinical and counselling psychologists and found no evidence for a relationship between exposure to traumatized clients and disrupted beliefs. More recently, Adams and Riggs (2008) also using a survey found, among 129 trainee clinical and counselling psychologists, that the amount of applied experience of working with traumatized clients was related to trauma symptoms. It was found that compared to trainees with greater exposure, trainees with less applied experience (two or less semesters) of working with traumatized clients reported higher levels of trauma symptoms on one subscale of the outcome measure. In a qualitative study, Fucci (2008) conducted interviews and investigated subjective experiences of trauma work among nine graduate clinical psychology students. It was found that many students described negative reactions to engaging with trauma narratives and some reported changes in their worldview.

Clearly secondary traumatization research among trainee clinical psychologists is sparse and in its infancy, thus the risks for this population are not well understood.

Furthermore, there are no known studies on trainee clinical psychologists in the U.K. If empirical evidence supports STS/VT among trainee clinical psychologists, there may be implications for training and supervision both at individual and organisational levels. If left unaddressed, it may be harmful to both therapists and clients, consequently potentially affecting services. Therapists may become emotionally distant; impacting on their ability to work effectively, be warm, be therapeutically available and responsive to clients (McCann & Pearlman, 1990). Individuals affected may leave their jobs or the profession as result (Pearlman & Saakvitne, 1995).

### **Aims of present study**

This study seeks to explore the extent of exposure to trauma work among trainee clinical psychologists during clinical placements. In addition, and primarily, it seeks to investigate the potential impact of working with clients who have experienced traumas on the psychological well-being of trainees. More specifically, the study seeks to assess which theoretical model (if any) best accounts for any negative effects associated with indirect exposure to client trauma among trainees: STS, VT, or even a non-specific model (depicting a more general relationship between indirect exposure to client trauma and general psychological distress). This will be investigated by exploring the relationship between the amount of exposure to trauma work and levels of general psychological distress, trauma symptoms and disrupted beliefs.

Given that individual and situational factors have been broadly proposed by VT theorists to possibly influence vulnerability/adaptability to developing VT, and that the

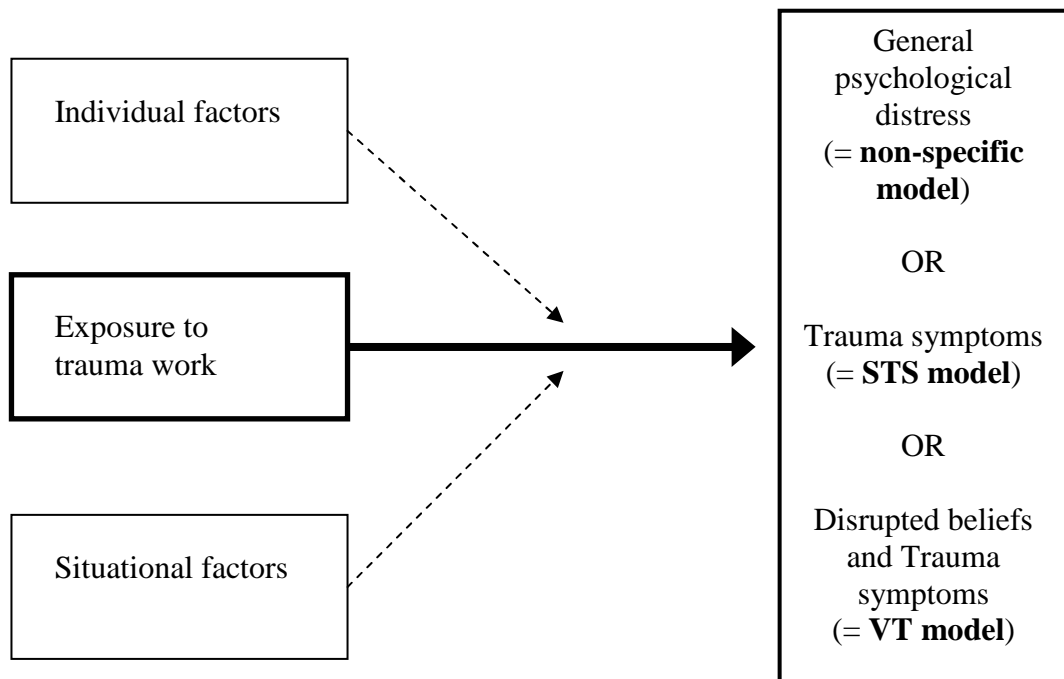
CSDT refers to the adaptation to the impact of trauma as being related to an interaction between the individual and their situation (Pearlman & Saakvitne, 1995), this study will also explore individual and situational factors that may be relevant to trainee clinical psychologists. Depending on which model(s) are supported, the contribution of individual and situational factors to levels of either general psychological distress, disrupted beliefs and/or trauma symptoms will be assessed. Factors of interest under these broad terms (individual and situational) are chosen based on previous research investigating potential contributors and those considered pertinent to the sample under investigation. These will include factors that have not been assessed in previous research.

For the purposes of this study, trauma work is described as direct/active clinical work with clients who have experienced traumatic events (e.g. serious accident, serious fire or explosion, non-sexual attack, sexual assault, natural disaster, military combat, imprisonment, physical abuse, sexual abuse, life threatening illness) and have reacted to the incident(s) with intense fear, horror or helplessness.<sup>10</sup> Figure 1 depicts the theoretical framework for this study.

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<sup>10</sup> The definition of traumatic events is taken from the DSM-IV-TR (APA, 2000).

Figure 1



**Aim 1**

To investigate the extent of exposure to trauma work among trainees, over a six month period during clinical placement.

**Aim 2**

To examine the relationship between the amount of exposure to trauma work and trainee well-being, specifically in relation to general psychological distress, trauma symptoms and disrupted beliefs, in order to empirically assess which model (non-specific model of general psychological distress, STS or VT) best accounts for any negative effects associated with indirect exposure to client trauma among trainees.

Hypothesis 1: reflecting a non-specific model; depicting a relationship between indirect exposure to client trauma and general psychological distress

*Greater amounts of exposure to trauma work will be related to greater levels of general psychological distress (but not trauma symptoms or disrupted beliefs).*

Hypothesis 1: reflecting the STS model

*Greater amounts of exposure to trauma work will be related to greater levels of trauma symptoms (but not disrupted beliefs).*

Hypothesis 2: reflecting the VT model

*Greater amounts of exposure to trauma work will be related to both greater levels of disrupted beliefs and trauma symptoms.*

### **Aim 3**

Depending on which model(s) are supported in aim two:

To examine the contribution of individual and situational factors on levels of either general psychological distress, disrupted beliefs and/or trauma symptoms, above and beyond the effect of exposure to trauma work.



## **Method**

### **Design**

The study comprised a cross-sectional design and a web-based survey was employed. This method was considered appropriate based on the majority of STS/VT research incorporating surveys. Indeed, Fama (2003) used an internet survey for her VT research with trainees. The survey for the present study comprised demographic questions, standardised measures and constructed questions specific to the study. The survey was piloted on six volunteer trainee clinical psychologists. Feedback was satisfactory, requiring no changes to the survey.

The primary (theoretical) independent variable was exposure to trauma work, a measure comprising the amount of trauma cases over the last six months. This study considered a measure of recent exposure to trauma work as a more reliable measure compared to overall exposure to trauma work, due to the potential variability of exposure across trainee year groups and exposure prior to clinical training, which may serve to confound findings. Although it is acknowledged that some studies exploring STS/VT among qualified staff have included a measure of prior experience of/years of experience in trauma work, this exposure is likely to be qualitatively different to exposure experienced before clinical training. Therefore in order to try and control for trainee histories of working with traumatized clients, the amount of trauma cases prior to the last six months and before clinical training was also included as a measure to explore its relationship with the dependent variables to determine whether it was a confound.

Secondary exploratory independent variables comprised a number of individual and situational factors. These included: age, gender, personal history of trauma (respondents report their personal traumas), resolution of personal trauma (degree to which feelings

towards personal traumas are resolved; respondents rate on a five point Likert scale from 'not at all resolved' to 'a great extent resolved'), quality of supervision received with trauma work over the last six months (respondents rate on a five point Likert scale from 'very poor' to 'very good'), quantity of trauma training (respondents report the amount of teaching days on PTSD/trauma work, including STS and VT), quality of trauma training (degree to which trauma teaching equipped trainees for trauma work; respondents rate on a five point Likert scale from 'not at all' to 'a great deal'), other distressing clinical work (respondents report the amount of cases over the last six months which were suicidal, physically aggressive/violent, verbally aggressive/threatening, self-harming, involved suicide) and level of stress of clinical work over the last six months (how stressful trainees have found clinical work; respondents rate on a five point Likert scale from 'not at all stressful' to 'extremely stressful').

Dependent variables were levels of general psychological distress, trauma symptomatology (intrusion, avoidance and arousal) and disrupted beliefs (in relation to safety, trust, esteem, intimacy and control) as measured by standardised measures. Measures were selected on the basis of past literature, psychometric properties, permission from authors and publishers to use online and their appropriateness and adequacy in assessing the constructs under investigation. Face validity and content validity were also used to aid this process. Current levels of general psychological distress, trauma symptoms and disrupted beliefs from indirect exposure to client trauma were assessed by asking participants to recall their experience of trauma work in relation to the last six months on clinical placement.

In addition, a validated PTSD screen was used to control for potential confounding effects of PTSD symptoms from possible personal trauma. Data from trainees at risk of PTSD from personal trauma would be controlled for in analyses addressing the hypotheses in order to increase the validity of the findings (that levels of general psychological distress, trauma symptoms and/or disrupted beliefs assessed were developed from indirect exposure to client trauma, rather than personal trauma).<sup>11</sup> Trainees were asked to complete the PTSD screen if they had experienced a personal trauma within the last 12 months.<sup>12</sup>

## **Participants and procedure**

### *Recruitment of participants*

Clinical psychology course directors were contacted via letters (see appendix F) and followed up by email to invite their trainees to participate in the study and to request permission to email trainees the hyperlink to the survey. Courses were also given posters (see appendix G) to advertise the study in their department. Additionally, the study was advertised in the Clinical Psychology Forum (see appendix H). The survey (see appendix C) was hosted on <http://www.surveymonkey.com> and participants were required click onto a hyperlink to access the survey.

### *Ethical considerations*

Ethical approval for the study was granted by the Department of Psychology Ethics Sub-Committee at the University of Sheffield (see appendix B). Survey completion was anonymous and voluntary. Participants were required to enter a secure password to enter the survey. Initially participants were taken to a page detailing relevant

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<sup>11</sup> In a study by Fama (2003) on VT and trainee clinical and counselling psychologists, trainees with risk of PTSD from personal trauma were excluded from analyses to increase the validity of the findings.

<sup>12</sup> A 12 month cut-off was chosen on an arbitrary basis relating to more recent history of personal trauma. It was judged to be more reliable to screen for the confounding effects of more recent history of personal trauma compared to more long-ago history of personal trauma.

information including details of the study and ethical considerations (confidentiality, anonymity, the right to withdraw, protection of harm, advice, consequences of the results and contact details for further information, queries, concerns or complaints). Participants were advised to contact their University students counselling service, personal/clinical tutor or their G.P. for any distress experienced from participating and wishing to talk to someone. Participants were required to give their informed consent by selecting the appropriate boxes before access to the survey was permitted. On completion of the survey, participants were taken to a closing information page where they were debriefed (see appendix C).

#### *Power analysis*

A priori power analysis was conducted via G\*power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) to determine the required sample size, to ensure sufficient statistical power for a reliable regression model – that is the probability of detecting a true effect when it exists. This was based on the statistical analysis with the anticipated greatest number of possible predictors (10 predictors). A ‘medium’ effect size was used for the calculation due to the lack of sufficient values in the literature on mental health professionals encompassing all the variables being assessed. Hence, assuming a medium effect size of  $f^2 = 0.15$ , a significance level of  $\alpha = 0.05$  and power of 0.8, 118 participants were required.<sup>13</sup>

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<sup>13</sup> We also wanted to ensure that the sample was, as far as possible, sufficiently representative of clinical psychology trainees and because we were uncertain what the return rate would be for a trainee web-based survey, and also how many of the trainees would have had exposure to trauma work in order to test the hypotheses, we decided to recruit more than the minimum required sample size. Ethical implications of sample size are discussed further in the discussion.

### *Participant characteristics*

A total of 564 clinical psychology trainees participated in the study (57 males, 507 females, with a mean age of 29.84 years). All 32 clinical psychology courses granted permission for their trainees to participate, though it was not possible to obtain an exact response rate due to the anonymous nature of the survey and therefore also not possible to identify sample characteristics for responders vs non-responders. However, the total number of trainees nationally on clinical psychology courses, taken from the Clearing House website during the time of data collection, was 1,694. Hence with a sample of 564 trainee clinical psychologists, the estimated response rate was 33.3%. Table 1 displays further demographic characteristics. The demographic characteristics of the sample seemed representative of U.K trainee clinical psychologists, although a greater number of first year trainees compared to second and third years completed the survey.

Table 1

*Demographic characteristics (N=564)*

Category	<i>n</i>	%
Ethnicity		
Caucasian	531	94.1
Non-Caucasian	33	5.9
Type of course route		
Full-Time	542	96.1
Part-time	21	3.7
BPS independent route candidate	1	.2
Year of training		
1 <sup>st</sup> year (going into 2 <sup>nd</sup> year)	238	42.2
2 <sup>nd</sup> year (going into 3 <sup>rd</sup> year)	186	33.0
3 <sup>rd</sup> year (soon to be qualified)	128	22.7
Other (included: year 4/5 on a flexible 5 year programme)	12	2.1
Type of placement		
Adult	209	37.1
Older Adult	84	14.9
Child/Adolescent	127	22.5
Learning Disability	82	14.5
Neuropsychology	13	2.3
Forensic	10	1.8
Health/oncology/palliative care	25	4.4
Other	14	2.5
Location of service		
Primary care	34	6.0
Secondary care	246	43.6
Tertiary care/specialist (e.g. forensic, health, eating disorders)	136	24.1
Combined settings (e.g. primary care & secondary care)	42	7.5
Other/insufficient information	106	18.8

**Measures** (see appendix C)

*General Health Questionnaire* (GHQ-12; Goldberg & Williams, 1988).

The GHQ-12 is a self-report 12-item measure and was used to assess the degree of general psychological distress (e.g. 'Have you recently felt constantly under strain?').

The questionnaire uses four-point items. The recommended scoring method is Likert scoring. Respondents rate items on individual Likert scales rating from 0 to 3 (the scales are defined differentially for each item). Scores are summed to form a total score. The higher the score, the greater the levels of distress. The measure has been reported to

have good reliability and validity (Goldberg & Williams, 1988). Hardy, Shapiro, Haynes and Rick (1999) report good internal consistency ( $\alpha = .89$ ). The internal consistency for this study was  $\alpha = .86$ .

*Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis & Figley, 2004).*

The STSS was used to assess the degree of trauma symptoms. This is a 17-item self-report measure specifically constructed for STS; assessing frequency of intrusion, avoidance and arousal symptoms related to indirect exposure to traumatic events by working clinically with traumatized individuals (e.g. 'My heart started pounding when I thought about my work with clients'). The scale uses five-point items. Respondents rate items on a Likert scale from 1 = never to 5 = very often. The scale comprises three subscales (intrusion, avoidance and arousal) and scores are summed for subscales and total score. The higher the scores, the greater the level of trauma symptoms. The measure has been found to have good validity, and good internal consistency for the total scale ( $\alpha = .93$ ), intrusion subscale ( $\alpha = .80$ ), avoidance subscale ( $\alpha = .87$ ) and arousal subscale ( $\alpha = .83$ ) (Bride et al., 2004). The internal consistencies for this study included  $\alpha = .89$  (total scale)  $\alpha = .69$  (intrusion subscale)  $\alpha = .78$  (avoidance subscale) and  $\alpha = .80$  (arousal subscale).

The STSS was chosen over other measures of trauma-related symptomatology (e.g. Impact of Event Scale; Horowitz, Wilner & Alvarez, 1979) as it overcomes the problems of measuring impact of direct exposure to trauma from any personal traumatic experiences. While some researchers have changed the wording of The Impact of Event scale (IES) in secondary traumatization research, the STSS was specifically designed for indirect exposure to client trauma and assesses the negative effects of this as proposed by the STS model. Furthermore, the STSS has been validated with samples of

indirectly trauma exposed individuals, while direct trauma exposure measures, such as the IES, have not. Therefore utilising the STSS overcomes any measurement error which may be associated with measures such as IES. In addition, the STSS has been used in recent secondary traumatization studies (e.g. Badger et al., 2008; Bride, 2007; Bride et al., 2007; Devilly et al., 2009).

*Trauma and Attachment Belief Scale (TABS; Pearlman, 2003).*

The TABS was used to assess the degree of disrupted beliefs. This is an 84-item self-report measure of disruptions in beliefs about self and others (e.g. ‘you can’t trust anyone’). The scale uses six-point items. Respondents rate items on a Likert scale from 1 = disagree strongly to 6 = agree strongly. Five domains of psychological need in relation to self and others are measured (control, esteem, intimacy, safety and trust) which form 10 subscales (see appendix D for definitions). Negative items are reverse scored and scores are summed for subscales and total score. The higher the scores, the greater level of disruption in beliefs. The TABS is the most recently developed measure for disrupted beliefs consistent with the VT model and has been used in recent VT studies assessing the impact of indirect exposure to client trauma (e.g. Diehm, 2007; Dunkley & Whelan, 2006), while many earlier studies have used the previous version – the Traumatic Stress Institute Belief Scale (Pearlman, 1996). The TABS has been found to have good validity, and good internal consistency for the total scale ( $\alpha = .96$ ) and a range for subscales (between  $\alpha = .67$  to  $.87$ ) (Pearlman, 2003). The internal consistency for this study for the total scale was  $\alpha = .96$  and a range for subscales (between  $\alpha = .68$  to  $.89$ ).



*Trauma Screening Questionnaire* (TSQ; Brewin et al., 2002).

The TSQ was used to screen for PTSD in order to identify trainees who may have current PTSD symptoms from any recent personal trauma, and subsequently control for in analysis of the impact of indirect exposure to client trauma.<sup>14</sup> This is a 10-item self-report measure of responses to traumatic events, which asks about symptoms in the past week. It comprises items that assess re-experiencing and arousal symptoms adapted from the PTSD Symptom Scale (Foa, Riggs, Dancu & Rothbaum, 1993). The scale uses two-point items, requiring respondents to answer with 'yes' or 'no'. Six or more 'yes' responses indicate a risk of PTSD. The questionnaire has been found to have sensitivity (.86), specificity (.93), positive predictive power (.86), negative predictive power (.93) and overall efficiency (.90).

### **Overview of statistical analysis**

Analysis was conducted using SPSS version 16. Initially data was screened and prepared for statistical analysis. For aim one, the extent of exposure to trauma work was explored through descriptive statistics (frequency distributions) and The Kruskal-Wallis test and Mann-Whitney tests were used to explore differences between trainee year groups. Investigation of aim two initially involved Pearson's correlations between exposure to trauma work and dependent variables: measures of general psychological distress (GHQ-12 scores), trauma symptoms (STSS scores) and disrupted beliefs (TABS scores). This was followed up by three hierarchical regression analyses with total scores of the measures as outcome variables. Individual and situational variables identified as significant in bivariate correlation analysis with outcome variables were controlled for in block one and exposure to trauma work was entered in block two. As exposure to trauma work was found to be a significant predictor of trauma symptoms,

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<sup>14</sup> Previous work has used the Post-traumatic Diagnostic Scale (PDS; Foa, 1995) as a measure of PTSD, but this was not permitted for use on web-based surveys.

investigation of aim three involved a hierarchical regression analysis with trauma symptoms (STSS total score) as the outcome variable. Exposure to trauma work was entered in block one and individual and situational variables were entered in blocks two and three. Standardized beta coefficients ( $\beta$ ) for individual predictors were examined. As exposure to trauma work was not correlated with or a predictor of general psychological distress (GHQ-12 total scores) or disrupted beliefs (TABS total scores), standard multiple regressions were conducted with these outcome variables and individual and situational variables (that were significant in bivariate correlation analysis) were entered simultaneously.

## Results

### Data screening

Statistical tests to assess normality for large samples are considered too sensitive (Tabachnick & Fidell 1996) and according to Tabachnick and Fidell (1996) “With large samples the significance of skewness is not as important as its actual size and the visual appearance of the distribution” (p.73). Thus, as a large sample was obtained, visual inspection (through histograms) was used to screen the data, to ensure it was normally distributed and free from outliers, so that the data was suitable for statistical analysis. One participant was excluded from analysis due to reporting a high number of research trauma cases (84) as opposed to clinical cases (the latter being the focus of the study). In relation to outcome variables, the STSS total score, together with its avoidance and arousal subscales had skewed distributions; subsequently logarithmic transformations were applied. Some independent variables were on a measurement scale stronger than an ordinal scale, but not as strong as a pure interval scale. Data transformations were not viable in these instances. Therefore non-parametric tests were conducted as comparison checks, when appropriate, which consistently yielded the same results. These included Spearman’s correlations and the Jonckheere-Terpstra test (a test for trend that takes the ordering of a variable into account). Parametric test scores are illustrated for the major analyses in this report to maintain consistency.

It was important to screen for the potential confound in trauma symptoms and disrupted beliefs levels, that is, the risk of PTSD from any recent personal trauma experienced by trainees, The TSQ identified whether trainees who had experienced a personal trauma were symptomatic in the past week. The mean score on the TSQ was 2.09 ( $SD = 2.57$ ,  $n = 159$ ), with a range of 0-10. A total of 20 (3.55%) trainees met cut-off criteria for being at risk of PTSD. Furthermore, independent t-tests were conducted on total scale

scores for outcome measures between trainees identified at risk of PTSD and trainees not at risk of PTSD. Trainees at risk of PTSD had significantly higher STSS (log transformed) scores ( $M = 1.59$ ,  $SD = .15$ ) than those not at risk of PTSD ( $M = 1.39$ ,  $SD = .12$ ),  $t(386) = 5.36$ ,  $p < .001$ . Also, trainees at risk of PTSD had significantly higher TABS scores ( $M = 230.50$ ,  $SD = 38.46$ ) than those not at risk of PTSD ( $M = 175.59$ ,  $SD = 37.51$ ),  $t(383) = 4.57$ ,  $p < .001$ . Additionally, trainees at risk of PTSD had significantly higher GHQ-12 scores ( $M = 19.50$ ,  $SD = 5.27$ ) than those not at risk of PTSD ( $M = 11.91$ ,  $SD = 4.74$ ),  $t(562) = 7.00$ ,  $p < .001$ . These results show that trainees identified as being at risk of PTSD from personal trauma had significantly higher mean levels of general psychological distress, trauma symptoms and disrupted beliefs compared to those not at risk of PTSD. Consequently, those identified at risk of PTSD were excluded during inferential statistical data analyses concerning the psychological well-being measures; leaving a sample of 544.

### **Descriptive statistics for standardised outcome measures**

Table 2 shows means, standard deviations and range scores for how the sample ( $n = 544$ ) scored across standardised measures. Untransformed means for STSS total score and avoidance and arousal subscale scores are reported for ease of interpretation.

Table 2

*Means (SDs) and ranges for the sample on outcome measures*

Measure	<i>M (SD)</i>	Range	
		Potential	Actual
GHQ-12 <sup>a</sup>	11.91 (4.74)	0-36	1-28
STSS <sup>b</sup>			
Intrusion	8.47 (2.68)	5-25	5-18
Avoidance	9.92 (3.31)	7-35	7-27
Arousal	7.21 (2.73)	5-25	5-20
Total	25.60 (7.70)	17-85	17-60
TABS <sup>c</sup>			
Self-safety	25.52 (6.92)	13-78	13-51
Other-safety	13.70 (4.03)	8-48	8-30
Self-trust	17.10 (4.15)	7-42	7-29
Other-trust	15.17 (4.89)	8-48	8-41
Self-esteem	17.06 (5.61)	9-54	9-40
Other-esteem	19.08 (3.43)	8-48	12-33
Self-intimacy	17.71 (4.14)	7-42	9-35
Other-intimacy	15.41 (6.08)	8-42	8-42
Self-control	20.29 (5.53)	9-54	9-48
Other-control	14.54 (3.75)	7-42	7-28
Total	175.59 (37.51)	84-504	97-331

*Note.* <sup>a</sup>*n* = 544 <sup>b</sup>*n* = 378 <sup>c</sup>*n* = 375. The variation in sample size is due to the variation in the number of trainees who completed the measures.

Based on cut-off criteria and normative scores (standardised scores from a non-clinical sample of adults; Pearlman, 2003) the mean total TABS score corresponds to a TABS normalized T-score of 48, this is indicative of an ‘average’ level of disruption in beliefs. Due to the lack of secondary traumatization research on trainees, no comparison data is available. However both Dunkley and Whelan (2006) in their study of telephone counsellors and Diehm (2007) in her study on Australian mental health professionals, also found mean total TABS scores in the ‘average’ range for disrupted beliefs. Thus,

the mean level of disrupted beliefs for trainees in the present study appear to be similar to qualified staff.

Based on cut-off criteria and normative scores (from a sample of social workers; Bride, 2007) the mean total STSS score in the present study is indicative of 'little/no' trauma symptoms. Comparison data is available only for qualified staff. Bride (2007) found a mean total STSS score in the 'mild' range among social workers and Bride et al. (2007) found a mean total STSS score in the 'moderate' range among child protective service workers. Therefore the mean level of trauma symptoms for trainees in the present study appears to be lower than qualified staff.

No clinical cut-offs indicative of 'caseness' exist for the GHQ-12 using the Likert scoring method. Higher scores are indicative of greater general psychological distress. There is no comparable data on trainees.<sup>15</sup> It is not possible to compare mean scores of general psychological distress across secondary traumatization studies because an alternative scoring method (binary scoring) has been used for the GHQ-12 (Sabin-Farrell, 2000) or studies have used varying general well-being measures. Research unrelated to secondary traumatization such as Milne (1987), found a mean GHQ-12 score of 21.2 at referral for individuals attending a clinical psychology clinic. This is comparable to the mean GHQ-12 score for the present study.

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<sup>15</sup> Cushway (1992) uses the GHQ-28 in her study of stress in trainee clinical psychologists. Thus, data is not comparable.

## Results for Aim 1

Aim one involved investigating the extent of exposure to trauma work among trainees, over a six month period, during clinical placement. This was investigated by calculating frequencies and percentages for the amount of trauma cases that trainees had directly/actively been involved in, over the last six months, during clinical placement. This was explored in the total sample and among the different year groups of training (first year  $n = 238$ ; second year  $n = 186$ ; third year  $n = 128$ ). Only a small number of trainees ( $n = 12$ ) were in their fourth or fifth years of training, hence these were excluded from the year group analysis. Also, frequencies and percentages for the type of client trauma were calculated for the total sample. Table 3 shows that for the total sample the most frequently reported amount of trauma cases by trainees was 1-2 trauma cases (42.9%) with a mean of 1.99 ( $SD = 1.3$ ) and the median within 1-2 trauma cases. Table 4 shows that the most frequent type of trauma clients experienced, as reported by trainees, was sexual abuse (35.3%), closely followed by physical abuse (32.1%).

Table 3

*Frequencies and percentages for the amount of trauma cases*

Trauma cases	<i>n</i>	%
0	168	29.8
1-2	242	42.9
3-4	77	13.7
5-6	40	7.1
7-8	17	3.0
9-10	8	1.4
11+	12	2.1

Table 4

*Frequencies and percentages for the type of client trauma*

Client trauma	<i>n</i>	%
Serious accident	108	19.1
Serious fire or explosion	22	3.9
Non-sexual attack	97	17.2
Sexual assault	119	21.1
Natural disaster	6	1.1
Military combat	41	7.3
Imprisonment	38	6.7
Physical abuse	181	32.1
Sexual abuse	199	35.3
Life threatening illness	74	13.1
Another traumatic event not listed	111	19.7

*Note.* Some trainees reported more than one of these events, hence totals are variable.

Since 19.7% of trainees reported that their clients had experienced another traumatic event not listed in the survey, content analysis was conducted on the qualitative descriptions. This indicated various other traumas, witnessing trauma, bereavement and other non-traumatic events.

Table 5 shows the extent of trauma work across three years of training. First year trainees (51.7%) and third year trainees (35.2%) most frequently reported 1-2 trauma cases, while second year trainees (43.4%) most frequently reported 0 trauma cases. However, third year trainees most frequently reported higher amounts of trauma cases (> 3-4 cases) on their caseload compared to first year and second year trainees. The Kruskal-Wallis test indicated that the year-of-training groups differed significantly in their exposure to trauma work as measured by the amount of trauma cases,  $H(2) = 39.21$ ,  $p < .001$ . A series of Mann-Whitney tests were conducted, using the Bonferroni correction to set alpha at .0167. These tests indicated that first years had significantly greater exposure than second years ( $U = 18407.50$ ,  $p = .001$ ). Also third years had



significantly greater exposure than first years ( $U = 11405.00, p < .001$ ) and second years ( $U = 7485.50, p < .001$ ).

Table 5

*Year of training and the frequencies and percentages for the amount of trauma cases*

Trauma cases	Year of training					
	First ( $M = 1.79, SD = .94$ )		Second ( $M = 1.49, SD = 1.11$ )		Third ( $M = 2.97, SD = 1.73$ )	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
0	60	25.2	81	43.5	24	18.8
1-2	123	51.7	70	37.6	45	35.2
3-4	32	13.4	19	10.2	26	20.3
5-6	20	8.4	8	4.3	10	7.8
7-8	2	0.8	5	2.7	8	6.2
9-10	0	0.0	2	1.1	6	4.7
11+	1	0.4	1	.5	9	7.0

*Note.* The median for all years of training was within 1-2 trauma cases.

## **Results for aim 2**

Aim two involved examining the relationship between the amount of exposure to trauma work and trainee well-being in relation general psychological distress, trauma symptoms and disrupted beliefs in order to assess three models (a non-specific model of general psychological distress, STS and VT). It was hypothesised that greater amounts of exposure to trauma work would either be related to greater levels of general psychological distress, disrupted beliefs and/or trauma symptoms.

### *Correlation analyses*

Initially, bivariate correlations with Pearson's correlation coefficients were performed between exposure to trauma work and each of the three dependent variables: general psychological distress (as measured by the GHQ-12), trauma symptoms (as measured by the STSS), disrupted beliefs (as measured by the TABS). No significant correlations were found between exposure to trauma work and GHQ-12 scores. A significant positive correlation was found between exposure to trauma work and STSS total scores, and all three STSS subscale scores. This suggests that greater amounts of exposure to trauma work related to greater levels of trauma symptoms (including, intrusion, avoidance and arousal). No significant correlations were found between exposure to trauma work and TABS total or subscale scores. Table 6 displays results for the correlation analyses.<sup>16</sup>

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<sup>16</sup> The amount of trauma cases prior to the last six months and before clinical training was not found to be significantly related to outcome measures (total and subscales scores) and therefore was not considered a confound, all  $r \leq .09$ ,  $p > .05$ .

Table 6

*Correlations between exposure to trauma work and outcome measures*

Measure	Exposure to trauma work
General psychological distress	
GHQ-12 total	-.02
Trauma symptoms	
STSS Total	.20**
STSS Intrusion	.18*
STSS Avoidance	.17*
STSS Arousal	.19**
Disrupted beliefs	
TABS Total	-.03
TABS Self-safety	-.07
TABS Other safety	-.06
TABS Self-trust	-.05
TABS Other-trust	.02
TABS Self-esteem	-.01
TABS Other-esteem	.01
TABS Self-intimacy	-.07
TABS Other-intimacy	-.01
TABS Self-control	-.01
TABS Other-control	.05

*Note.* \* $p < .05$ . \*\* $p < .01$ .

*Regression analyses*

In order to investigate aim two further, hierarchical regression analyses were performed.<sup>17</sup> Three regression models were conducted, in turn, with general psychological distress (as measured by the GHQ-12), trauma symptoms (as measured by the STSS), disrupted beliefs (as measured by TABS). The regressions were performed with total scores of outcome measures in order to assess how much exposure to trauma work uniquely contributes as a predictor to the variance in overall general

<sup>17</sup> This type of regression allows variables to be entered in blocks, which presents 'steps' of the regression model. It allows the extent to which sets of predictors explain variance in the outcome variable over and above that explained by other variables entered in earlier steps.

psychological distress, overall trauma symptoms and overall disrupted beliefs, over and above other (possible confounding) variables.

Prior to regression analyses, histograms and scatterplots of the residuals values of each outcome variable were inspected to determine if the assumptions for linearity, homoscedasticity and normality were satisfied. These assumptions were considered to be met with the GHQ-12, TABS and the STSS<sup>18</sup>; showing reasonable normal distributions. Multicollinearity checks were also conducted between all possible predictor variables. Following guidelines from Tabachnick and Fidell (1996) and Field (2005), correlations between predictor variables were screened for high values (>.70) and the Variance Inflation Factor (VIF) values were also checked. The predictor variables did not appear to be strongly correlated and VIF values were below 10 (a suggested cut-off by Field, 2005). See table 7 for Pearson's correlation coefficients between predictor variables.

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<sup>18</sup> A logarithmic transformation was applied to STSS earlier during correlation analysis as a result of a skewed distribution.

Table 7

*Correlations between all possible predictor variables*

Predictor variable	Age ( <i>n</i> =544)	Gender ( <i>n</i> =544)	Personal history of trauma ( <i>n</i> =544)	Resolution of personal trauma ( <i>n</i> =270)	Quality of supervision ( <i>n</i> =378)	Quantity of trauma training ( <i>n</i> =544)	Quality of trauma training ( <i>n</i> =544)	Level of stress of clinical work ( <i>n</i> =544)	Other distressing clinical work ( <i>n</i> =544)	Exposure to trauma work ( <i>n</i> =544)
Age	-									
Gender	-.09*	-								
Personal history of trauma	.18**	-.02	-							
Resolution of personal trauma	.09	-.09	.06	-						
Quality of supervision	.00	-.07	-.10	.16*	-					
Quantity of trauma training	.00	-.03	.10*	.02	.15**	-				
Quality of trauma training	-.00	-.03	.02	.09	.14**	.47*	-			
Level of stress of clinical work	-.04	.11*	-.02	-.12	-.17**	-.03	-.06	-		
Other distressing clinical work	-.01	-.06	.08	.05	.03	.16**	.07	.02	-	
Exposure to trauma work	.06	.02	.11** <sup>19</sup>	.05	.08	.25**	.11*	.05	.16**	-

Note. \* $p < .05$ . \*\* $p < .01$ .

<sup>19</sup> Variability in significance is due to rounding factors.

In order to identify potential confounding factors (in the relationship between exposure to trauma work and levels of general psychological distress, trauma symptoms and disrupted beliefs) bivariate correlations were also conducted between other factors (exploratory variables comprising individual and situational factors) and total scores of outcome measures. Table 8 displays these correlations. Other factors that showed significant correlations were considered confounding factors and thus controlled for and entered in step one of each regression and exposure to trauma work (the theoretical variable) was entered in step two. This model allows the examination of the unique effect of exposure to trauma work on outcome variables over and above the effect of other (confounding) factors. Hence, the predictive variability exposure to trauma work shares with other variables is removed. This analysis was repeated with all three outcome variables.

Table 8

*Correlations between other factors (exploratory variables) and outcome measures*

Exploratory variable <sup>a</sup>	Measure		
	General psychological distress	Trauma symptoms	Disrupted beliefs
Age	-.04	-.09	-.07
Gender	.04	.04	.00
Personal history of trauma	.12**	.09	.22**
Resolution of personal trauma	-.08	-.13	-.24**
Quality of supervision	-.28**	-.08	-.18**
Quantity of trauma training	-.09*	.04	-.05
Quality of trauma training	-.15**	-.14**	-.15**
Level of stress of clinical work	.26**	.38**	.20**
Other distressing clinical work	.01	.16**	.10

*Note.* <sup>a</sup> comprising individual and situational factors

\* $p < .05$ . \*\* $p < .01$

*Hierarchical regression with general psychological distress*

Other factors accounted for 17.0% of the variance in general psychological distress,  $R^2(5, 372) = .170, p < .001$ . Exposure to trauma work was not found to significantly predict the variance in general psychological distress over and above the other (confounding) factors,  $\Delta R^2(1, 371) = .001, p = .544$ .

*Hierarchical regression with trauma symptoms*

Other factors accounted for 17.8% of the variance in trauma symptoms,  $R^2(3, 374) = .178, p < .001$ . Exposure to trauma work was found to significantly predict the variance in trauma symptoms, explaining 3.1% of the variation, over and above the other (confounding) factors,  $\Delta R^2(1, 373) = .031, p < .001$ .

*Hierarchical regression with disrupted beliefs*

Other factors accounted for 16.6 % of the variance in disrupted beliefs,  $R^2(5, 191) = .166, p < .001$ . Exposure to trauma work was not found to significantly predict the variance in disrupted beliefs over and above the other (confounding) factors,  $\Delta R^2(1, 190) = .006, p = .247$ .

### Results for aim 3

Aim three involved examination of the contribution of individual and situational factors on levels of either general psychological distress, trauma symptoms and/or disrupted beliefs, above and beyond the effect of exposure to trauma work. However, investigation of aim three was dependent on findings from aim two. As earlier findings only found a significant relationship between exposure to trauma work and trauma symptoms, which supports the hypothesis reflecting the STS model, it was appropriate to conduct a further hierarchical regression with trauma symptoms.

Exposure to trauma work was entered in step one of the regression. Level of stress of clinical work, other distressing clinical work and quality of trauma training (situational factors) were entered in step two, as these were significant in earlier bivariate correlation analyses. The other individual and situational factors (personal history of trauma, resolution of personal trauma, quality of supervision, quantity of trauma training, age and gender) were entered in step three to examine whether they added any additional variance to the regression model. Both joint and unique contributions of these predictors were examined. This model allows examination of how much individual and situational factors contribute to the variance in trauma symptoms above and beyond exposure to trauma work.

Exposure to trauma work accounted for 5.6 % of the variance in trauma symptoms,  $R^2(1,196) = .056, p = .001$ . The three situational factors significantly increased the variance explained in trauma symptoms by 15.8%,  $\Delta R^2(3,193) = .158, p < .001$ . The remaining individual and situational factors did not explain any of the variation in trauma symptoms,  $\Delta R^2(6, 187) = .014, p = .747$ . The overall model, with all 10



predictors present was significant and explained 22.8 % of the variance in trauma symptoms,  $R^2(10, 187) = .228 p < .001$ .

Inspection of unique contributions of each predictor indicated that exposure to trauma work, level of stress of clinical work and quality of trauma training were significant predictors. This suggests that greater amounts of exposure to trauma work and greater levels of stress of clinical work were related to greater levels trauma symptoms and the better the quality of trauma training related to lower levels of trauma symptoms. Table 9 shows the unique contributions of the individual predictors at each step in the regression model. The standardized beta coefficients ( $\beta$ ) measure the relative importance of the predictors.

Table 9

*Hierarchical regression model for STS*

	Predictor	$\beta$
Step 1		
	Exposure to trauma work	.24**
Step 2		
	Exposure to trauma work	.23**
	Level of stress of clinical work	.25**
	Other distressing clinical work	.11
	Quality of trauma training	-.26**
Step 3		
	Exposure to trauma work	.22**
	Level of stress of clinical work	.24**
	Other distressing clinical work	.10
	Quality of trauma training	-.26**
	Personal history of trauma	.07
	Resolution of personal trauma	-.06
	Quality of supervision	-.04
	Quantity of trauma training	.03
	Age	-.06
	Gender	.02

Note. Step 1  $F= 11.63$ . Step 2  $F= 13.14$ . Step 3  $F= 5.53$ .

\* $p < .05$ . \*\* $p < .01$ .

**Additional analyses: standard multiple regression**

As exposure to trauma work was not significantly related to either general psychological distress or disrupted beliefs in earlier analyses, it was decided that two standard multiple regressions would be of interest to determine predictors of general psychological distress and disrupted beliefs. Individual and situational factors that significantly correlated with these outcome measures (see table 8) were entered simultaneously as predictors into the regression. Inspection of unique contributions of

each predictor indicated that personal history of trauma, resolution of personal trauma and quality of trauma training were significant predictors of disrupted beliefs, as shown in table 10. Level of stress of clinical work, quality of supervision and quality of trauma training were significant predictors of general psychological distress, as shown in table 11.

Table 10

*Standard multiple regression showing predictors of disrupted beliefs*

Predictor	$\beta$
Level of stress of clinical work	.08
Personal history of trauma	.22**
Resolution of personal trauma	-.20**
Quality of supervision	-.12
Quality of trauma training	-.18*
R <sup>2</sup>	.14
F	7.60**

*Note.* n = 197

\*p < .05. \*\*p < .01.

Table 11

*Standard multiple regression showing predictors of general psychological distress*

Predictor	$\beta$
Level of stress of clinical work	.27**
Personal history of trauma	.08
Quality of supervision	-.21**
Quantity of trauma training	.02
Quality of trauma training	-.13*
R <sup>2</sup>	.15
F	15.27**

*Note.* n = 378

\*p < .05. \*\*p < .01.

## Discussion

This is the first study to our knowledge to explore indirect exposure to client trauma and its impact on U.K. trainee clinical psychologists. The first aim was to investigate the extent of exposure to trauma work, over six months during clinical placement. The majority of trainees had a caseload comprising 1-2 trauma cases, with the most common type of client trauma being sexual abuse, which was closely followed by physical abuse. First year trainees had significantly greater exposure to trauma work compared to second years, and third years had significantly greater exposure compared to first and second years. Moreover, a greater number of third years had a larger trauma caseload (> 3-4 cases). This finding could reflect developmental levels of training. Third years may progressively take on greater amounts of trauma cases compared to first years as a result of increasing competency. Also the least exposure to trauma work in the second year may reflect the type of placements trainees are typically on (i.e. learning disability and child/adolescent). These results are informative as no known studies have specifically explored the extent of exposure to trauma work among trainee clinical psychologists.

The primary aim of the study was to investigate the relationship between the amount of exposure to trauma work and the well-being of trainees, in relation to levels of general psychological distress, trauma symptoms and disrupted beliefs, in order to assess which model (a non-specific model of general psychological distress, STS or VT) best accounts for any negative effects associated with indirect exposure to client trauma among trainees. Exposure to trauma work was not found to be related to general psychological distress, as measured by the GHQ-12. Therefore the hypothesis in relation to the non-specific model was not supported. This lack of significant finding is consistent with similar studies among qualified mental health professionals using the

GHQ-12 or alternative general well-being measures (Baird & Jenkins, 2003; Pearlman & MacJan, 1995; Sabin-Farrell, 2000; Schauben & Frazier, 1995).

In contrast, exposure to trauma work significantly correlated with trauma symptoms, as measured by the STSS, including intrusion, avoidance and arousal. Furthermore, regression analysis indicated that exposure to trauma work was a significant predictor of trauma symptoms. This suggests that greater amounts of exposure to trauma work related to greater levels of trauma symptoms. Therefore the hypothesis in relation to the STS model was supported. These findings are consistent with a number of studies with qualified mental health professionals, which have found similar relationships between indirect exposure to client trauma and trauma symptoms using the STSS or other trauma symptom measures (e.g. Bober & Regehr, 2006; Chrestman, 1995; Deighton et al., 2007; Diehm, 2007; Devilly et al., 2009; Kassam-Adams, 1995; Sabin-Farrell, 2000; Schauben & Frazier, 1995; Sprang et al., 2007).

However, exposure to trauma work was not related to disrupted beliefs, as measured by the TABS. Therefore the hypothesis in relation to the VT model was not supported. This finding is consistent with much of the literature among qualified mental health professionals using earlier versions of the TABS (e.g. Bober & Regehr, 2006; Kadambi & Trustcott, 2003; McLean et al., 2003; Kadambi & Trustcott, 2004; Robinson et al., 2003; Sabin-Farrell, 2000) and moreover, a study with trainee clinical and counselling psychologists (Fama, 2003). However, some studies have found greater amounts of indirect exposure to client trauma to be related to greater levels of disrupted beliefs among qualified mental health professionals (e.g. Diehm, 2007; Schauben & Frazier, 1995). It is possible that exposure to trauma work did not relate to disrupted beliefs in the present study because the TABS may measure longer-term changes in beliefs. The

theoretical model of VT suggests that the development of disrupted beliefs is gradual, progressive and lasting from cumulative exposure to client trauma narratives (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Trainees may not have been exposed to traumatized clients long enough, over the six month period, for any disrupted beliefs to surface. Perhaps a 'threshold' of exposure was not reached to elicit such deeper schematic changes in meaning and beliefs.

Depending on which model(s) were supported, the final aim was to investigate the contributing factors. As findings supported the STS model, contributions of individual and situational factors on levels of trauma symptoms were explored, to examine how much they explained variance in trauma symptoms above and beyond exposure to trauma work. Regression analyses indicated that joint contributions of level of stress of clinical work, other distressing clinical work and quality of trauma training significantly predicted variance in trauma symptoms. Examination of their unique contributions indicated that, in addition to exposure to trauma work, level of stress of clinical work and quality of trauma training were significant predictors of trauma symptoms, but not other distressing clinical work (comprising the amount of cases that involved clinical events that were distressing). The results suggest greater levels of stress of clinical work related to greater levels of trauma symptoms and better quality of trauma training (that is the greater the degree to which trauma teaching equipped trainees for trauma work) related to lower levels of trauma symptoms. Moreover, quality of trauma training was the strongest predictor, followed by level of stress of clinical work.

There are no known studies which have specifically explored the impact of quality of trauma training hence this is a unique and encouraging finding as it suggests quality of trauma training may play a protective role in the development or degree of trauma

symptoms. Other studies have focused on the quantity of trauma training and found *some* evidence to suggest less trauma training is associated with greater levels of trauma symptoms (Adams & Riggs, 2008; Sprang et al., 2007). This is in contrast to the findings from this study, as quantity of trauma training was not related to trauma symptoms. It appears from the findings from this study that greater perceived stress levels of clinical work may increase the risk or degree of trauma symptoms. Badger et al. (2008) also found that greater occupational stress related to greater trauma symptoms, which therefore supports this finding. The present study also explored other factors (age, gender, personal history of trauma, resolution of personal trauma and quality of supervision received with trauma work) but these were not significantly related to trauma symptoms. Given that PTSD literature has found evidence for gender and previous trauma (Brewin, Andrews & Valentine, 2000; Halligan & Yehuda, 2000) it is perhaps surprising that neither were significantly related to trauma symptoms in this study. However, other factors including gender and personal history of trauma that have been investigated in secondary traumatization research has been argued to have mixed findings (Bride, 2004). It is possible that the lack of significant finding for gender, in particular, in the present study was a result of the small number of males in the sample.

While the VT model was not supported, personal history of trauma, resolution of personal trauma and quality of trauma training were significant predictors of disrupted beliefs. These findings suggest that greater amounts of personal history of trauma related to greater levels of disrupted beliefs. Also, the greater the degree to which trainees had resolved their personal traumas and the greater the degree to which trauma teaching equipped trainees for trauma work related to lower levels of disrupted beliefs. Furthermore, personal history of trauma was the strongest predictor. Certainly, some studies have also found a similar relationship with personal history of trauma and

disrupted beliefs (Cunningham, 2003; Pearlman & MacIan, 1995; Vandeußen & Way, 2006). There are no known studies which have investigated the relationship between resolution of personal trauma or quality of trauma training and disrupted beliefs.

Although trainees may show resilience to the negative changes (in the form of disrupted beliefs) from indirect exposure to client trauma, it appears that trainees who have experienced personal traumas are more vulnerable to disrupted beliefs and it is possible that trainees who had resolved their personal traumas are more resilient to them.

The non-specific model of general psychological distress was also not supported, but level stress of clinical work, quality of supervision received with trauma work and quality of trauma training were significant predictors of general psychological distress. Furthermore, level of stress of clinical work was the strongest predictor. The findings suggest the greater the degree to which trauma teaching equipped trainees for trauma work related to lower levels of general psychological distress. Also, greater levels of stress of clinical work related to greater levels of general psychological distress, and the better the quality of supervision received with trauma work related to lower levels of general psychological distress. Similarly, Cushway (1992) found among trainee clinical psychologists a significant correlation between the extent of stress and general psychological distress and found the most frequent reported stressor was poor supervision. Kumary Ajvir, Baker and Martyn (2008) also found greater stress to be associated with greater general psychological distress among trainee counselling psychologists, which also support the findings.

### **Strengths and limitations**

A strength of the study is that it drew upon a large sample of trainees to assess both theoretical models (STS and VT) representing secondary traumatization phenomena and



it identified and controlled for potential confounding factors. However, limitations of the study should be considered. The total sample size was larger than required, which potentially poses ethical problems (Altman, 1980; Bacchetti, Wolf, Segal & McCulloch, 2005) through the unnecessary involvement of extra participants, placing undue distress in participating. However as Lenth (2001) states “sample size problems are context-dependent. For example, how important it is to increase the sample size to account for such uncertainty depends on practical and ethical criteria...” (p. 192). A larger sample was recruited in order to ensure the sample was, as far as possible, sufficiently representative of clinical psychology trainees, thus facilitating more reliable regression models and generalisability of the findings. From the literature, the anticipated response rate was unknown for trainee web-based surveys and also how many participating trainees would have had exposure to trauma work in order to test the hypotheses. The time period for recruitment was limited to two and a half months (to ensure as far as possible that trainees completed the survey following the last six months of their placements). In the end, during this recruitment time period, there were 564 respondents, 20 however, were excluded from major analyses on grounds that they were at risk of PTSD from personal trauma and 396 trainees had trauma cases, out of which, only a sample size of 197 was viable for some regression analyses<sup>20</sup>. As such, it was not possible to know how many respondents had suitable data sets for the analyses until all data were collected and screened. Lastly, the survey was voluntary and therefore all trainees made an informed decision to participate.

It is unclear whether the sample was representative of U.K trainees, as the number of trainees from each course was not known. The majority of trainees were British and Caucasian, limiting cross-generalisability of findings. The response rate of 33.3% also

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<sup>20</sup> due to variability in sample size (*n*) across the variables as a result of the applicability of questions in the survey for trainees and missing data.

limits generalisability and was slightly lower than the response rate of 36.3% found in Adams and Riggs' (2008) study on trainees from Texas<sup>21</sup>.

Survey methodology can be liable to common method variance (CMV). CMV is “variance that is attributable to the measurement method rather than the constructs the measures represent” (Podsakoff, MacKenzie, Lee & Podsakoff, 2003, p. 879). Potential sources of CMV in this survey include the type of measurement (e.g. context of specific items, response format and general context) and response biases such as demand characteristics, social desirability, negative affectivity and acquiescence. It is possible that trainees who were coping well with trauma work may have participated.

Conversely, those affected by their trauma work may have participated because research was meaningful to them. The affective state of trainees could have impacted ratings given for items. Similarly, the construction of items and terminology of measures, for example, with negative connotation (e.g. ‘distressing clinical work’) may have also impacted responses as they could influence emotional state. Also, trainees may have held assumptions concerning the similarities across some of the measures; these tautological aspects of measurement may have similarly impacted responses. These method biases can threaten the validity of findings, particularly the relationships between variables, by inflating or deflating them, and thus may be spurious (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). The findings, therefore, should be considered in the context of these potential biases.

The way exposure to trauma work was measured restricted the findings. Trauma work was broadly defined and hence it was not possible to distinguish whether trainee trauma cases comprised clients with a PTSD diagnosis. It is possible that the focus of the

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<sup>21</sup> Their survey was not web-based. This was the only study, for this population in the literature, to make comparisons from.

therapeutic work with PTSD clients, compared to clients without PTSD, may have been different. It is possible that some trainees did not work therapeutically with the trauma per se, but worked on other psychological difficulties. Hence, the extent of exposure to the traumatic material during therapy may have been different for trainees. Additionally, the severity of the trauma may have influenced the impact of indirect exposure to client trauma on the well-being of trainees. Future research may benefit from including participants' rating of the severity of the client trauma and nature of the therapeutic work. Additionally, due to retrospective design, accuracy of reporting the amount of trauma cases seen may be questionable. Also, some trainees reported the traumatic events of clients' to comprise bereavements and other non-traumatic events; events which are not strictly traumatic, but distressing.

In relation to the findings for STS, it is notable that the significant correlations between exposure to trauma work and trauma symptoms (both STSS total and subscale scores) were all relatively low. It is possible that this may be a consequence of the large sample size, therefore these results should be interpreted with some degree of caution. Also, exposure to trauma work only uniquely explained a small proportion of the variance in trauma symptoms, which suggests that other factors may be important in contributing to levels of trauma symptoms. The final regression model for STS (with other predictors present) explained a fairly modest proportion of the variance in trauma symptoms, which draws attention to large proportions of the variance unaccounted for, which suggests unmeasured characteristics. Future research may consider other factors that may contribute which were not assessed in this study (e.g. coping strategies). Results of regression analyses are dependent on the set of variables chosen and therefore predictors may only be significant under these set of conditions. It is possible that the lack of significant finding to support VT may have been related to the effects of coping

strategies reducing any changes in cognitive schemata, which this study did not control for. Also, perhaps other aspects of indirect exposure to trauma that were not measured, such as 'empathic engagement' with the trauma material maybe more relevant.

Certainly, Pearlman and Saakvitne (1995) refer to the development of VT being in relation to the empathic engagement of exposure to clients' trauma narratives.

The cross-sectional nature of the study means that the findings may not be reliable overtime and the results cannot imply causality, but are limited to inferences based on relationships only. Longitudinal studies would allow investigation of the trajectory of trauma symptoms and disrupted beliefs overtime, thus capturing longer-term changes (which may be particularly relevant to VT). However, the use of longitudinal methods may be challenging since trainees continuously change placements and therefore exposure to trauma work would be highly variable, along with multiple confounding factors.

### **Clinical implications**

From the findings that support the STS model, training courses, placement supervisors and trainees themselves could be encouraged to increase awareness of potential trauma symptoms arising from working with traumatized populations. Trainees may benefit from having a more balanced caseload on clinical placement in order to limit the indirect exposure to client trauma. However, this could have the effect of limiting their training experience of working with traumatized clients. Alternatively, it may be more effective for training courses to focus on enhancing or maintaining the quality of teaching on working with traumatized clients, to help trainees feel more equipped for trauma work. However, further research is needed to determine what constitutes 'quality'. The measure of quality of trauma training referred to how much trainees

perceived the degree to which trauma teaching equipped them for trauma work. Perhaps future research could evaluate the effectiveness of trauma training with objective methods. It seems important for attention to be given to self-care. Trainees should be supported in helping to actively reduce levels of stress. It may be useful for training courses to incorporate or encourage the use of evidence-based coping strategies from the stress literature. Certainly, increasing research on contemporary approaches such as mindfulness, with trainee mental health professionals, has found evidence for increasing well-being, reducing stress levels and psychological distress (Shapiro, Brown & Biegel, 2007; Ying, 2009; Ying & Han, 2009). This may also be useful for the overall general well-being of trainees. Research on the effectiveness of coping strategies for trauma work may identify and help advise trainees, courses and supervisors further.

In relation to the general well-being of trainees, findings indicate that the quality of supervision received with trauma work may be pertinent. The opportunity for trauma work specific supervisor training may be beneficial, although this may not be feasible or may stretch resources. Perhaps trainees could be encouraged to provide supervisors with feedback as to what they find helpful in supervision when discussing their work with traumatized clients. In relation to findings on disrupted beliefs, trainees may need to be guided to appropriate sources of support (e.g. personal therapy) to discuss and process any impact of personal trauma to help them with potential longer-term negative changes in beliefs.

In summary, while it is important to acknowledge that trainees may experience STS, if services/training programmes offer quality trauma training, the negative effects of trauma work may be mitigated. As Elwood et al. (2011) emphasises, only a sufficiently

robust evidence-base would warrant specific intervention. Offering quality supervision with trauma work may also reduce levels of general psychological distress.

### **Theoretical implications**

Findings from this study suggest that the theoretical construct of STS proposed by Figley (1995) most appropriately depicts the negative effects associated with working with traumatized clients among trainee clinical psychologists as opposed to VT (McCann & Pearlman, 1990) or a non-specific model of general psychological distress. However, factors other than exposure to trauma work also appear to be important in the development of or adaptability to STS. In fact, level of stress of clinical work was found to be a stronger predictor (compared to exposure to trauma work) of trauma symptoms. This sheds some light on questions raised by Sabin-Farrell and Turpin (2003) indicating the difficulty in determining whether the negative impact of trauma work relates to the stressful nature of mental health work in general or specifically relates to the trauma work itself. Interestingly, the present study found quality of trauma training as the strongest predictor. However, these findings could be a reflection of the measure of exposure to trauma work having a restricted range.

The lack of finding for VT may have been influenced by trainees undergoing processes of growth and/or resilience following engagement with their clients' traumas narratives. Emerging trauma research has suggested that experiencing traumatic events can also result in posttraumatic growth (PTG) which can involve reconstruction of cognitive schemata (Tedeschi & Calhoun, 2004). Moreover, Arnold, Calhoun, Tedeschi and Cann, (2005) found similar characteristics to PTG among therapists working with traumatized clients. This suggests the potential for vicarious posttraumatic growth. Vicarious resilience (VR) is another recently proposed concept (Hernandez, Gangsei & Engstrom,

2007). VR is unique to trauma work and refers to a process of inner transformation of vicarious learning about resiliency, whereby clinicians are positively affected by their clients' resilience in relation to their trauma; facilitating empowerment and reframing. These concepts may also have implications for resolving personal traumas. Trainees that had resolved their traumas may have undergone PTG, with the possible effect of reducing the risk of disrupted beliefs.

Personal history of trauma was most predictive of disrupted beliefs, which is supportive of trauma theories of personal trauma such as the theory of shattered assumptions (Janoff-Bulman, 1985, 1992). In order for VT to be a distinct construct it needs to demonstrate that it develops from indirect exposure to client trauma as opposed to personal trauma, which this study failed to show. This raises concerns regarding the existence of the construct; a view shared by other researchers (Devilley et al., 2009; Kadambi & Trustcott, 2004; Kadambi & Ennis, 2004). The use of the term and acceptance of VT may need to be reconsidered and ceasing any proposals of VT specific interventions is advised.

### **Recommendations for future research**

Future research is encouraged to address limitations of the present study. Also, because this is the first known secondary traumatization study with U.K. trainee clinical psychologists, findings are not conclusive. Further research is needed to assess the reliability of the findings and establish normative data for the STSS and TABS on U.K. trainees.

In relation to the findings for STS, exploration of the specific aspects constituting quality of trauma training in helping trainees prepare for trauma work, and research on

the effectiveness of any coping strategies used by trainees, in relation to trauma work, would be useful. It would be useful for research to include control groups to compare levels of trauma symptoms for those with and without indirect exposure to client trauma as this may help determine the uniqueness of STS to those working with traumatized clients.

As secondary traumatization research with trainees is in its infancy it would be premature to entirely discount the existence of VT among trainees. It may be useful to explore disrupted beliefs from qualitative research, this may facilitate the development of perhaps more appropriate/sensitive VT measures since Sabin-Farrell (2000) found, among some qualitative data, that mental health workers experienced cognitive changes that were consistent with the VT model.

Future research could also assess cumulative exposure to trauma work by assessing repeated exposure to the traumatic material and explore the type of therapeutic work involved when working with traumatized clients. Research could also incorporate a measurement of empathic engagement, which may advance knowledge on aspects of indirect exposure to trauma that may be more relevant compared to the amount per se. These alternative ways of measuring trauma work may be more inclusive. Research should also be encouraged to incorporate an assessment of vicarious PTG and VR; this may be more comprehensive and representative of the impact of trauma work among trainees, which may also aid personal and professional development.



## **Conclusions**

The present study found the majority of trainee clinical psychologists with caseloads of 1-2 trauma cases and the most common type of trauma being sexual abuse. Exposure to trauma work was found to be a significant predictor of trauma symptoms, but not disrupted beliefs or general psychological distress. The study therefore provides support for STS, which is generally more consistent with findings from qualified mental health professionals. Situational factors contributed to the variance in trauma symptoms above and beyond exposure to trauma work; level of stress of clinical work was a significant predictor of trauma symptoms and quality of trauma training was a significant (inverse) predictor of trauma symptoms. Therefore, other factors also appear to be important in the development/degree of trauma symptoms. The study did not find evidence to support VT or a non-specific model of general psychological distress. However, various individual and situational factors were significantly predictive of disrupted beliefs and general psychological distress. Particularly for the proposed theoretical construct of VT, findings raise concerns about its existence as personal history of trauma (among others) was a significant predictor of disrupted beliefs.

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# APPENDICES

## Appendix A. Formats

1. Letter of approval for nominated Journal from Director of Research Training
2. Author instructions for *Clinical Psychology Review* (removed)
3. Author instructions for *British Journal of Clinical Psychology* (removed)



Department Of Psychology.  
Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training  
& consultancy.

Clinical Psychology Unit  
Department of Psychology  
University of Sheffield  
Western Bank  
Sheffield S10 2TP UK

Telephone: 0114 2226550  
Fax: 0114 2226610  
Email: [c.harrison@sheffield.ac.uk](mailto:c.harrison@sheffield.ac.uk)

9 February 2010

Rakhee Makadia  
Third year trainee  
Clinical Psychology Unit  
University of Sheffield

Dear Rakhee

I am writing to indicate our approval of the journal(s) you have nominated for publishing work contained in your research thesis.

**Literature Review:** Clinical Psychology Review

**Research Report:** British Journal of Clinical Psychology/Journal of Traumatic Stress

Please ensure that you bind this letter and copies of the relevant Instructions to Authors into an appendix in your thesis.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'A Thompson', enclosed in a light blue rectangular box.

Dr Andrew Thompson  
Director of Research Training

## **Appendix B. Ethical approval**

Confirmation email from the Department of Psychology Ethics Sub-Committee at the University of Sheffield.



R Makadia <pcp07rm@sheffield.ac.uk>

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## Ethics of "Secondary Trauma: Exposure to client trauma"

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p.sheeran@sheffield.ac.uk <paschal.sheeran@googlemail.com>

2 July 2009 16:10

To: Rakhee Makadia <pcp07rm@sheffield.ac.uk>

Cc: Graham Turpin <g.turpin@sheffield.ac.uk>, Josie Levick <j.levick@sheffield.ac.uk>

Dear Rakhee:

Thank you for your submission to the Department Ethics Sub-Committee (DESC), "Secondary Trauma: Exposure to client trauma and the impact on Trainee Clinical and Counselling Psychologists" [single study].

Your proposal was reviewed independently by three members of DESC. Each of the reviewers believed that the methods and procedures conform to the British Psychological Society's Guidelines on the Ethics of Research with Human Participants. However, a query was raised about whether it would be appropriate to advise participants to discuss any possible distress that might arise from completing the questionnaire with their Personal Clinical Tutor (see question 8 in Information for Participants, and paragraph 2 in the Closing Information: Debrief).

I would like you and your supervisor(s) to discuss this issue and decide whether you wish to amend Appendix D and F along these lines. Please inform me what you decide (by email is fine).

The issue of whether or not participants should be advised to discuss any distress with their Personal Clinical Tutor comes under the category of "Suggested Amendment". Thus, I can confirm that the ethics of your research are approved.

Yours sincerely,

Professor Paschal Sheeran  
Chair, DESC

--

[p.sheeran@sheffield.ac.uk](mailto:p.sheeran@sheffield.ac.uk)  
<http://sheeran.socialpsychology.org/>  
<http://www.erosresearch.org/>

## **Appendix C. Online survey**

(Removed)



## Appendix D. TABS subscales

<b>Self-safety</b>	The need to feel one is reasonably safe from harm inflicted by self or others.
<b>Other-safety</b>	The need to feel that significant others are reasonably safe from harm inflicted by self or others.
<b>Self-trust</b>	The belief that one can trust their own judgement and perceptions.
<b>Other-trust</b>	The belief that one can trust others.
<b>Self-esteem</b>	The belief that one has self-worth.
<b>Other-esteem</b>	The belief that others are worthy.
<b>Self-intimacy</b>	The belief that spending time alone is pleasurable
<b>Other-intimacy</b>	The belief that one is connected to others
<b>Self-control</b>	The need to be in control of one's emotions and behaviour
<b>Other-control</b>	The need to be in charge and in control when with others

Pearlman (2003)

## Appendix E. Summary of strengths & limitations of reviewed studies

*Methodological strengths and limitations of studies reviewed*

Authors	Strengths	Limitations
<i>STS studies</i>		
Deighton, Gurriss & Traue (2007)	Secondary traumatization outcome measure. Specific measure of indirect exposure to client trauma	Analysis limited to bivariate correlations. Lack of control for possible confounding factors. Inclusion of a general/longer-term measure of indirect exposure to client trauma. Distress scales not validated outcome measure.
Badger, Royse & Craig (2008)	Validated STS specific outcome measure. High response rate	Analysis limited to bivariate correlation. Lack of control for possible confounding factors. General/longer-term measure of indirect exposure to client trauma.
Bride, Jones & MacMaster (2007)	Validated STS specific outcome measure	Unclear whether size of caseload refers specifically to trauma caseload or caseload in general. Analysis limited to bivariate correlation. Weak correlation. Lack of control for potential confounding factors.
Ennis & Horne (2003)	Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables. Exploration of influence of personal history of trauma.	Measure of indirect exposure to client trauma lacks precision. Small sample size. No indication of whether participants were instructed to complete outcomes measures in relation to their work with sex offenders. Psychometric properties of outcome measures not reported.
Nelson-Gardell & Harris (2003)	Secondary traumatization outcome measure. Other factors assessed with indirect exposure to client trauma (via stepwise multiple regression) enabling exploration with	Biased sample as participated in a training program on STS General/longer-term measure of indirect exposure to trauma.

other factors and controlling for possible confounding variables.

Sprang, Clark & Whitt-Woosley (2007)

Secondary traumatization outcome measure.  
Specific measure of indirect exposure to client trauma.  
Other factors assessed with indirect exposure to client trauma (via hierarchical regression) enabling exploration with other factors and controlling for possible confounding variables.  
Exploration of significant differences on CF scores across professional groups; professional group controlled for.  
Extensive sample size.

Relatively low response rate.

Strength of relationship relatively weak compared to other variables.

Lack of control of trauma specific training.

Way, Vandeusen, Martln, Applegate & Jandle (2004)

Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables.

No indication of whether participants were instructed to complete outcome measure in relation to their trauma/clinical work.

Measure of indirect exposure to client trauma lacks specificity/precision.

Adams & Riggs (2008)

Other factors assessed with indirect exposure to client trauma, enabling exploration with other factors and controlling for possible confounding variables.

Controlling for demographic confounding variables  
Exploration of interaction effects between defense style and applied experience of working with trauma clients.

No indication of whether participants were instructed to complete outcome measure in relation to their trauma/clinical work.

### ***VT studies***

Way, Vandeusen & Cottrell (2007)

Analysis limited to bivariate correlation.

Lack of statistical information to determine strength of the relationship.

Limited to only two subscales of TSIBS-RL.

Measure of indirect exposure to client trauma lacks specificity/precision.

Cunningham (2003)	<p>Relatively high response rate.</p> <p>Specific measure of indirect exposure to client trauma.</p> <p>Specified time frame for recall of percentage of trauma cases in caseload.</p>	<p>Analysis limited to bivariate correlation.</p> <p>Personal history of trauma not controlled for despite its significant effect on outcome variable.</p> <p>Inclusion of a general/longer-term measure of indirect exposure to client trauma.</p>
Vandusen & Way (2006)	<p>Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables.</p>	<p>Lack of statistical information to determine how much indirect exposure to client trauma uniquely contributed to variance in outcome variable.</p> <p>Limited to only two subscales of TSIBS-RL.</p> <p>Measure of indirect exposure to client trauma lacks specificity/precision.</p>
Robinson, Clements and Land (2003)	<p>Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Specific measure of indirect exposure to client trauma.</p>	
Kadambi & Trustcott (2003)	<p>Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Comparison group.</p>	<p>Measures of indirect exposure to client trauma lack specificity/precision.</p>
Bober & Regehr (2006)	<p>Inclusion of trauma symptoms outcome measure.</p> <p>Other factors assessed with indirect exposure to client trauma (via stepwise multiple regression) enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Specific measure of indirect exposure to client trauma.</p>	<p>No indication of whether participants were instructed to complete trauma symptoms outcome measure in relation to their trauma/clinical work.</p> <p>Stepwise multiple regression not conducted with TSIBS scores due to small subsample size (n=53)</p> <p>Lack of control for some variables in regression analysis that were significant at bivariate or univariate level.</p> <p>Sample comprised mixture of mental health professionals, but individual differences on outcome measures not explored.</p>

McLean, Wade & Encel (2003)	<p>Inclusion of trauma symptoms outcome measure.</p> <p>Other factors assessed with indirect exposure to client trauma enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Gender added as a covariate in analyses due to significant gender differences on outcome measures.</p> <p>Relatively high response rate.</p> <p>Relatively specific measure of indirect exposure to client trauma.</p> <p>Instructed participants to complete trauma symptoms outcome measure in relation to work with their client population.</p>	Sample comprised mixture of mental health professionals, but did not explore for possible professional group differences on outcome measures.
Kadambi & Trustcott (2004)	<p>Inclusion of trauma symptoms outcome measure.</p> <p>Other factors assessed with indirect exposure to client trauma enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Instructed participants to complete trauma symptoms outcome measure in relation to work with their client population.</p> <p>Relatively specific measure of indirect exposure to client trauma.</p> <p>Comparison group.</p>	General practice group sampled from university counselling centres which may not be representative of mainstream general practices.
Devilley, Wright & Varker (2009)	<p>Inclusion of validated STS specific outcome measure.</p> <p>Other factors assessed with indirect exposure to client trauma (via multiple regression) enabling exploration with other factors and controlling for possible confounding variables.</p> <p>Specification on what constitutes trauma work, incorporating DSM-IV definition.</p> <p>Control group.</p> <p>Specific measures of indirect exposure to client trauma.</p> <p>Exploration of possible differences on outcome measures due to sample comprising mixture of mental health professionals.</p>	<p>No regression analysis conducted with TSIBS-RL.</p> <p>Unclear whether ‘caseload’ entered in multiple regression was caseload in general or trauma specific.</p> <p>Response rate unobtainable.</p>

## **Appendix F. Letter to clinical psychology course directors**



Department Of Psychology.  
Clinical Psychology  
Unit.

Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training  
& consultancy.

**Clinical Psychology Unit  
Department of Psychology  
University of Sheffield  
Western Bank  
Sheffield S10 2TP UK**

---

6th July, 2009.

Dear Course Director,

### **Exposure to client trauma and the impact on Trainee Clinical and Counselling Psychologists**

I am a second year trainee clinical psychologist conducting my doctoral research on secondary trauma (i.e. secondary traumatic stress and vicarious trauma) amongst trainee clinical and counselling psychologists. This research is jointly supervised by Professor Graham Turpin and Dr Rachel Sabin-Farrell. We have gained both scientific and ethical approval for the research and have also been given financial support from the Higher Education Academy Psychology Network.

We would like to seek your permission to invite your trainees to participate in a web-based survey to assess 1) the extent to which trainee clinical and counselling psychologists see clients who have experienced trauma and 2) whether trainees are affected by working with clients who have experienced traumatic events. The study also aims to explore factors which may contribute towards trainee well-being in relation to trauma work.

The survey will ask questions about: trainee well-being, personal experiences of traumatic events, prior and current experience of trauma work, trauma related teaching, supervision and any other distressing clinical work. The survey will also include standardised measures, including General Health Questionnaire 12 (to assess symptoms of general psychological distress), Trauma screening questionnaire (to screen for symptoms of PTSD), Trauma and Attachment Belief Scale (to assess symptoms of vicarious trauma by examining disruptions in beliefs about self and others) and secondary traumatic stress scale (to assess symptoms of secondary traumatic stress by measuring frequency of intrusion, avoidance and arousal symptoms). The survey should take approximately 20 minutes to complete.

The survey will be hosted by an online survey company (<http://www.surveymonkey.com>). Trainees will be emailed information about the study, a password and the hyperlink to the survey. This will initially take them to a covering page detailing relevant participant information including brief details of the study and ethical considerations (including approximate completion time, confidentiality and anonymity issues, withdrawal, protection of harm, advice, consequences of the results and researcher contact details). Participants will also be required to give their informed

consent by selecting the appropriate boxes to access the survey. On completion of the survey, participants will be taken to a closing information page (debrief).

We have enclosed for your information the participant information, consent and closing information pages. For those of you who may wish more information about the research, we will shortly be sending you an email with attachments for the research proposal and survey. We have also enclosed an information sheet for courses (specifically for Course Director/Administrator), including a reply slip.

If you are happy for us to invite your trainees to participate in the research, we would be grateful if you could notify us by **31<sup>st</sup> July, 2009** (either by post or email) with information on how you would like us to send our study's invitation email to trainees for them to access the survey. We would be happy to send the invitation email to an identified person (e.g. an administrator) who could then forward onto all of your trainees. Or there may be an alternative method which you would like to suggest.

We hope you can support this research and we will plan to disseminate our findings to all contributing courses, participants and to publish in the relevant professional journals.

If you have any queries or questions please do not hesitate to contact me, Rakhee Makadia ([pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk)).

Yours sincerely,

**Rakhee Makadia (Principle Investigator)**

Trainee Clinical Psychologist

University of Sheffield

[pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk)

**Prof Graham Turpin (Co-Academic supervisor)**

University of Sheffield

[g.turpin@sheffield.ac.uk](mailto:g.turpin@sheffield.ac.uk)

**Dr Rachel Sabin-Farrell (Co-Academic supervisor)**

University of Nottingham/Nottinghamshire Healthcare NHS Trust

[rachel.sabin-farrell@nottshc.nhs.uk](mailto:rachel.sabin-farrell@nottshc.nhs.uk)



## **Information for participants**

You are invited to participate in a doctoral research study from the University of Sheffield. This research is supervised by Professor Graham Turpin and Dr Rachel Sabin-Farrell. Please read the following information.

### **Why have I been contacted and what is the purpose of the study?**

This study aims to assess whether trainee clinical and counselling psychologists see clients who have experienced trauma and whether trainees are affected by working with clients who have experienced traumatic events. The study also aims to explore factors which may contribute towards trainee well-being in relation to trauma work. Even if you have not worked with clients who have experienced trauma, we would still like you to complete the questionnaire.

The survey will ask questions about: you and your well-being, your personal experiences of traumatic events, your prior and current experience of trauma work, any teaching you have had in relation to trauma work, the supervision you have received and any other distressing clinical work you may have experienced.

### **What will it involve?**

There are a set of questions which will take approximately 20 minutes to complete. If you would like to take part, please complete the questionnaire by [insert DATE here].

### **Do I have to take part?**

There is no obligation to take part

### **Confidentiality**

All information in the questionnaire is completely anonymous and you will not be asked for your name or contact details. All information will be kept securely with no identifying information

### **Can I withdraw from the study after I have started to complete the questionnaire?**

You can withdraw from the study at anytime, before you have selected the 'submit' tab at the very end of the survey, and your data will be deleted. You also have the option at the end of the survey to either submit or withdraw your data if you wish.

### **What if I become distressed through completing the questionnaire?**

If you are distressed and wish to talk to someone, you may want to contact your University students counselling service, personal/clinical tutor, or your G.P.

### **What will happen to the results?**

The results may be written up for publication or shared with other researchers.

**Will I be able to see the results of the study?**

If you would like feedback on the overall results, the results will be available on this website from August, 2010. No individual feedback will be available as all responses are anonymous

**Who should I contact if I need any further information or want to make comments or complaints about the study?**

You can contact Rakhee Makadia (Trainee Clinical Psychologist) via email at [pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk), Professor Graham Turpin ([g.turpin@sheffield.ac.uk](mailto:g.turpin@sheffield.ac.uk)) or Dr Rachel Sabin-Farrell ([rachel.sabin-farrell@nottshc.nhs.uk](mailto:rachel.sabin-farrell@nottshc.nhs.uk)). Alternatively you can contact the University of Sheffield Registrar: Dr David Fletcher at [d.e.fletcher@sheffield.ac.uk](mailto:d.e.fletcher@sheffield.ac.uk)

THANK YOU  
for taking the time to read this

**Consent**

Please indicate by selecting one of the following if you would like/not like to participate in the study:

Yes, I consent to participate by completing the survey. I have read and understand the above information.

No, I do not wish to give my consent to participate by completing the survey.

**Closing information: Debrief**

Thank you very much for taking time to complete this questionnaire. The results of the study will be made available on this website from August 2010.

If any of the questions have caused you any distress and you wish to talk to somebody, please be advised to contact your University student counselling service, your personal/clinical tutor, or your G.P. for advice.

If you have any concerns, comments or complaints about the study, these may be addressed via email to Rakhee Makadia at [pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk), Professor Graham Turpin ([g.turpin@sheffield.ac.uk](mailto:g.turpin@sheffield.ac.uk)) or Dr Rachel Sabin-Farrell ([rachel.sabin-farrell@nottshc.nhs.uk](mailto:rachel.sabin-farrell@nottshc.nhs.uk)). Alternatively you can make a complaint by contacting the University of Sheffield Registrar: Dr David Fletcher at [d.e.fletcher@sheffield.ac.uk](mailto:d.e.fletcher@sheffield.ac.uk)

THANK YOU

## Information sheet for Course Director/Administrator

### **How will trainees participate in the survey?**

We would like to forward an email invitation containing brief details of the study and a password to your trainees. Trainees will be able to access the survey through this email.

### **When will the survey be administered?**

We will be administering the survey in September, 2009. We are trying to obtain data from trainees who have completed a whole academic year. It is important that we capture responses from trainees towards the end of their placements and year of training. We appreciate this is a busy time of year with annual leave and assignments/projects etc. We would therefore like to ask you specifically to encourage and remind trainees to participate in the research. We aim to recruit trainees between September and November 2009.

### **Which trainees are we interested in participating?**

We would like i) all 3<sup>rd</sup> year trainees completing their training to participate ii) all 2<sup>nd</sup> years going into their 3<sup>rd</sup> years to participate and iii) all 1<sup>st</sup> years going into their 2<sup>nd</sup> year to participate.

### **How can our course help?**

We would appreciate it if you could bring the survey to the attention of all trainees during September by forwarding our email invitation to their emails. We will also send you a poster as a visual reminder, if you are able to distribute/display this.

### **How do I agree for trainees on this course to be invited to participate?**

If you agree permission to invite your trainees, please complete and return the reply slip (below) either by email or post (via the freepost envelope) by 31<sup>st</sup> July, 2009. Please indicate the best way for us to send an email invitation in September 2009 to enable trainees to access the survey.

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### Reply slip

1) Name of course:

2) Name of course director(s):

3) Total number of 1<sup>st</sup> year trainees:

4) Total number of 2<sup>nd</sup> year trainees:

5) Total number of 3<sup>rd</sup> year trainees:

6) I agree to trainees on this course to be invited to participate in this research study:

YES/NO

7a) I agree for you to email (name and email address of identified person)

.....  
who will forward the invitation email, containing information about the survey, to all trainees in **September 2009**

OR

7b) I would prefer the following alternative method to send the invitation email, containing information about the survey, to all trainees

.....

## **Appendix G. Advertisement poster**

### **Are you a clinical psychology trainee?**

Would you be interested in assisting with some research on the effects of working with trauma cases on trainee experiences?

#### **What is the study for?**

To assess the extent to which trainees see clients who have experienced trauma and whether trainees are affected by working with clients who have experienced traumatic events. The study also aims to explore factors which may contribute towards trainee well-being in relation to trauma work.

#### **What if I haven't worked with clients who have experienced trauma?**

It doesn't matter, we would still like you to participate

#### **What type of study is it?**

Web-based survey

#### **How long will it take?**

Approximately 15-25 minutes

Please check your emails as you will receive information about this study and how you can participate...

All you need to do is simply click on the hyperlink on your email to access the survey!

If you would like more information you can contact:

Rakhee Makadia (Principle Investigator)

Trainee Clinical Psychologist

University of Sheffield

[pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk)

Prof Graham Turpin (Co-Academic supervisor)

University of Sheffield

[g.turpin@sheffield.ac.uk](mailto:g.turpin@sheffield.ac.uk)

Dr Rachel Sabin-Farrell (Co-Academic supervisor)

University of Nottingham/Nottinghamshire Healthcare NHS Trust

[rachel.sabin-farrell@nottshc.nhs.uk](mailto:rachel.sabin-farrell@nottshc.nhs.uk)

## Appendix H. Clinical Psychology Forum advert

**Are you a trainee clinical psychologist?**

**Would you be interested in assisting with some D Clin Psych research on:**

**'Exposure to client trauma and the impact on trainee clinical and counselling psychologists?'**

*You might have received my email with the hyperlink to the survey via your clinical training course during August/September 2009...*

**What is the study for?**

To assess the extent to which trainees see clients who have experienced trauma and whether trainees are affected by working with clients who have experienced traumatic events. The study also aims to explore factors which may contribute towards trainee well-being in relation to trauma work.

**Who is the study supervised by?**

Professor Graham Turpin  
University of Sheffield  
[g.turpin@sheffield.ac.uk](mailto:g.turpin@sheffield.ac.uk)

AND

Dr Rachel Sabin-Farrell  
University of Nottingham/Nottinghamshire Healthcare NHS Trust  
[rachel.sabin-farrell@nottshc.nhs.uk](mailto:rachel.sabin-farrell@nottshc.nhs.uk)

**What if I haven't worked with clients who have experienced trauma?**

It doesn't matter, we would still like you to participate

**What type of study is it?**

An anonymous web-based survey

**How long will it take?**

Approximately 15-25 minutes

**Who do I need to contact to get access to complete the survey?**

You can email Rakhee Makadia, trainee clinical psychologist from the University of Sheffield; principal investigator ([pcp07rm@sheffield.ac.uk](mailto:pcp07rm@sheffield.ac.uk)) who will email you the hyperlink to the survey