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Authors	Pellegrini, Seán;Moore, Philip;Murphy, Mike
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Secondary Trauma and Related Concepts in Psychologists: A Systematic Review

Seán Pellegrini, Philip Moore, Mike Murphy

School of Applied Psychology, University College Cork, Cork, Ireland

Part of a thesis presented by Seán Pellegrini for the degree of Doctor of Clinical Psychology

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Abstract

Secondary trauma, which is also often referred to as secondary traumatic stress, vicarious traumatization, and compassion fatigue are the negative consequences that occur when an individual hears about the traumatic experiences of another person. Certain professions who are exposed to hearing about traumatic experiences are at an increased risk of these difficulties. Psychologists are one such group, and the aim of the current systematic review was to investigate the prevalence of and variables associated with these concepts in psychologists. The following databases were searched as part of the review: PsycINFO, PsycARTICLES, Embase, MEDLINE, and Web of Science. Inclusion criteria required that psychologists were qualified and involved in therapeutic work. Eight articles were extracted for narrative synthesis. The articles indicated that psychologists are not typically meeting the clinical threshold for the various concepts of interest, although a single representative figure could not be determined for this cohort. Potential reasons for this are discussed. An exception to this finding was observed for psychologists working directly with trauma, as difficulties resulting from the concepts of interest were indicated within this cohort. A key finding was the paucity of research that exists on this topic. Limitations and implications of the findings are outlined.

Keywords: secondary trauma; vicarious traumatisation; compassion fatigue; secondary traumatic stress; psychologist

Secondary Trauma and Related Concepts in Psychologists: A Systematic Review

In the late 1970s the effects of trauma exposure were first observed in emergency workers who began to display symptoms that were similar to the people they cared for (Moulden & Firestone, 2007). It later emerged that this transfer of trauma was not restricted solely to those who were exposed to trauma directly, but also to people who were exposed to trauma indirectly by supporting those who had been traumatized. This phenomenon of indirect traumatization was referred to as secondary trauma (ST), and since then, research has increasingly found that listening to the traumatic experiences of others causes distress and traumatization for the listener (Lerias & Byrne, 2003). Figley (1995) first defined ST as "the stress resulting from helping or wanting to help a traumatised or suffering person" (p. 7), and it encompasses the negative psychological, emotional, and cognitive effects that result from hearing about the traumatic experiences of others (Greinacher et al., 2019).

In addition to ST, various terms have been created over the years that try to outline the impact on people who work in the caring professions and who support traumatized people (Sabin-Farrell & Turpin, 2003). One such term is secondary traumatic stress (STS), which describes the difficulties among professional helpers that mimic post-traumatic stress disorder (PTSD), and that occur as a result of exposure to the traumatic experiences of others (Baird & Kraken, 2006). Typical symptoms of STS include intrusive imagery, avoidant responses, physiological arousal, distressing emotions, and functional impairment (Bride & Kintzle, 2011). Another term that is often used is vicarious traumatization (VT). This concept is defined as the transformation that occurs as a result of the empathic engagement with a client's traumatic experiences (Pearlman & Mac Ian, 1995). This is specifically composed of changes in cognitive processes, such as alterations in thoughts that occur from direct practice with trauma populations (Newell & MacNeil, 2010). VT is considered to have a pervasive

effect on a person's identity, world-view, memory systems, psychological needs, and beliefs (Canfield, 2005).

Another concurrent term is compassion fatigue (CF), which was first described as a form of burnout that affects people in the caring professions (Joinson, 1992). CF has been referred to as a state of biological, physiological, and emotional exhaustion and dysfunction as a result of prolonged exposure to the suffering of other people (Figley, 1995, p. 34). More broadly, CF is thought of as "the cost of caring" (Sorenson et al., 2017, p. 456). CF differs from burnout as the latter is a broad term that can be related to stress responses in any profession, and not just the helping professions (Slocum-Gori et al., 2013). Examination of the similarities and differences between these concepts has found that all concepts share at least one or more of the following symptoms: indirect exposure to traumatic material, symptoms of PTSD, and negative shifts in therapists' cognitive schema (Jenkins & Baird, 2002). ST, VT, STS, and CF are therefore used interchangeably in the literature (Cieslak et al., 2013; Gołąb et al., 2014) and are referred to and researched as the same thing, as these concepts are not generally considered to be conceptually distinct (Bercier & Maynard, 2015). While this creates some confusion for researchers trying to measure these concepts, there is a general consensus regarding the fact that all of these constructs result from working with traumatized people (Bercier & Maynard; Cieslak et al.; Gołąb et al.; Greinacher et al., 2019; Huggard et al., 2017; Nimmo & Huggard, 2013; Sodeke-Gregson et al., 2013).

While these interrelated concepts of interest (COI) may not be theoretically distinct, when examined individually, they contribute a better understanding of the consequential negative sequelae of caring (Nimmo & Huggard, 2013). Some authors make the argument that CF is comprised of both STS and burnout, so while some overlap exists, there are aspects of CF that are unique (Stamm, 2010). Other authors argue that the concepts are all part of the same continuum but that they are separated by the severity of their associated symptoms,

with CF and VT eventually developing into ST (Mento et al., 2020). Another conceptual distinction between CF and VT lies in the permanence of change that occurs within the practitioner, as clinicians affected by VT have their cognitive schema permanently altered whereas this is not the case in CF (Sabo, 2011). It is therefore recommended that authors conceptualize and consider all of these interrelated concepts separately when completing research in this area (Newell & MacNeil, 2010).

The prevalence of STS varies between different mental health professions and ranges from 15– 39% (Cieslak et al., 2013). When compared to the prevalence of PTSD in the general population that sits at 6% (Kessler et al., 2005), 15% as a lower bound appears to be relatively high. However, one has to consider that mental health workers can sometimes be repeatedly exposed to the traumatic experiences of others. The 15% lower bound figure was reported by social workers who overwhelmingly worked to support clients with issues stemming from traumas (Bride, 2007). STS is at the very least more likely to be an issue for professions that offer direct therapeutic support to clients – given how it is a phenomenon that occurs as a consequence of helping others (Elwood et al., 2011). Research has identified that once practitioners have an awareness of ST, it is possible to manage the negative consequences with various strategies, such as physical and psychological self-care, personal psychotherapy, limiting exposure to traumatized clients, and professional supports such as supervision (Hesse, 2002).

The investigation of the prevalence of the COI in health professions is a rapidly developing area of research, and many reviews are currently ongoing that are investigating these concepts with different health professionals. To the best of the authors' knowledge, a gap in the knowledge base exists, as no systematic review has ever been completed that investigated the prevalence of the COI in psychologists. This is noteworthy given that psychologists are a group of professionals that have an increased risk of developing STS as a

result of their therapeutic work (Cieslak et al., 2013). However, psychologists are not a monolith, and work in very diverse areas of care, further divided by a variety of sub-specialties who use a wide range of different approaches (Wahass, 2005). Investigating the prevalence of the COI in psychologists will also elucidate the specific aspects of the role and functions of psychologists that may or may not contribute to the development of the COI.

There is a growing awareness of the importance of investigating the COI in mental health professionals. In 2020 a public significance statement was published that requested that more research be devoted to better examining ST to ensure that clinicians are engaging with their work in a competent and professional manner (Pirelli et al., 2020). The current systematic review therefore examined the COI in psychologists given that the negative consequences significantly impact a psychologist's ability to look after themselves and to support the people in their care. The findings of this review are therefore of relevance to both psychological practitioners and policymakers. The main aim of the current systematic review was to investigate the prevalence of the COI in psychologists and to examine the variables that influence the COI in psychologists.

Method

Search Strategy

The following electronic databases were included in the systematic review; PsycINFO, PsycARTICLES, Embase, MEDLINE, and Web of Science. These databases were searched in June 2020 with the following key words: (Secondary Traumatic Stress OR Secondary Trauma OR Vicarious Trauma OR Compassion Fatigue) AND (Psychologist OR Psychologists OR Psycholog! OR Therapist OR Mental Health Worker OR Mental Health Professional OR Clinician).

Inclusion & Exclusion Criteria

Psychologists could be of any discipline, work in any setting, country, or work with any population. Psychologists needed to be qualified, practising psychologists involved in therapeutic work. Research that involved multiple mental health professionals was only included if data on psychologists was presented separately. To be included, studies had to be written in English, published in a peer-reviewed journal, and have an electronic source available. Other types of literature, including gray literature, were purposefully excluded so that searches were restricted to well-established academic databases. No date restrictions were implemented. No exclusion criteria were applied to date restrictions, research methodology, or outcome measures to increase the pool of available articles to assist with the investigation of the prevalence of and variables that influence the COI in psychologists.

Data Screening and Extraction

Data screening and extraction was completed in stages and by two independent reviewers. There was a total of four stages and both reviewers were involved in each stage of the review. The second reviewer reviewed 10% of the research articles in every stage of the review with the exception of stage 4, as 100% of the research articles in stage 4 were assessed by both reviewers. This was done in accordance to the guidelines of the quality assessment tool used in stage 4 that advised having two independent reviewers involved in all appraisals of quality (Hong et al., 2018). Disagreements between the reviewers were resolved through discussion and consensus. In stage 1, the titles and abstracts of the studies were screened. Duplicates were identified using EndNote, and then again by hand. Abstracts progressed to stage 2 if they made reference to at least one of the concepts of interest and mentioned a psychologist or an inclusive term. In stage 2, the full-text papers of the research articles were screened for inclusion and exclusion criteria to determine eligibility for data extraction. Stage 3 involved data extraction of included studies that directly examined ST in psychologists. In

stage 4 the remaining studies underwent quality assessment. All of the data screening and extraction tables were created specifically for this systematic review.

Quality Assessment

The Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018) for quantitative descriptive studies and qualitative studies were chosen as the quality assessment tools. Both versions of the MMAT consist of two screening questions and five items. The MMAT for quantitative descriptive studies was chosen as it was designed for research that reports on the incidence or prevalence of any given phenomenon, while the MMAT for qualitative studies is suitable for qualitative data of any kind (Hong et al.). Using different versions of the same quality assessment tool facilitated comparisons between research using different methodologies. Articles were given a rating of "weak," "moderate," or "strong" to provide a qualitative descriptor that summarized the outcome of quality assessment in stage 4 of the review. As suggested by Hong et al., this rating score was derived from a sensitivity analysis, which was calculated by dividing the total points that the article scored on the MMAT by the maximum score that an article could potentially achieve on the MMAT. In line with previous research, a score of ≤0.50 was classified as "weak," scores between 0.51 to 0.79 were classified as "moderate," and scores of ≥0.80 as "strong" (Li et al., 2015). A limitation of the MMAT is that it does not assess for levels of evidence and thus an additional analysis was completed to address this, with articles being classified according to the methodological quality of the study. Articles were graded using hierarchy of evidence guidelines (Ackley et al., 2008, p. 7) that ranked the relative strength of research on a scale that ranged from Level I (the strongest) to Level VII (the weakest).

Data Analysis

Data analysis consisted of a narrative synthesis review. A narrative synthesis was the most appropriate data analysis method given the various research designs included in the

systematic review and the wide range of methods that are used to measure the COI. Additionally, a narrative synthesis was suitable for both quantitative and qualitative studies, which allowed for a uniformity of analysis across research designs. This was deemed to be a key advantage as it allowed for the comparison of papers regardless of the methodology that was used. Previous systematic reviews on this topic have noted the diverse range of measuring instruments used in this area (Van Mol et al., 2015) and have also used narrative synthesis to complete analysis.

Results

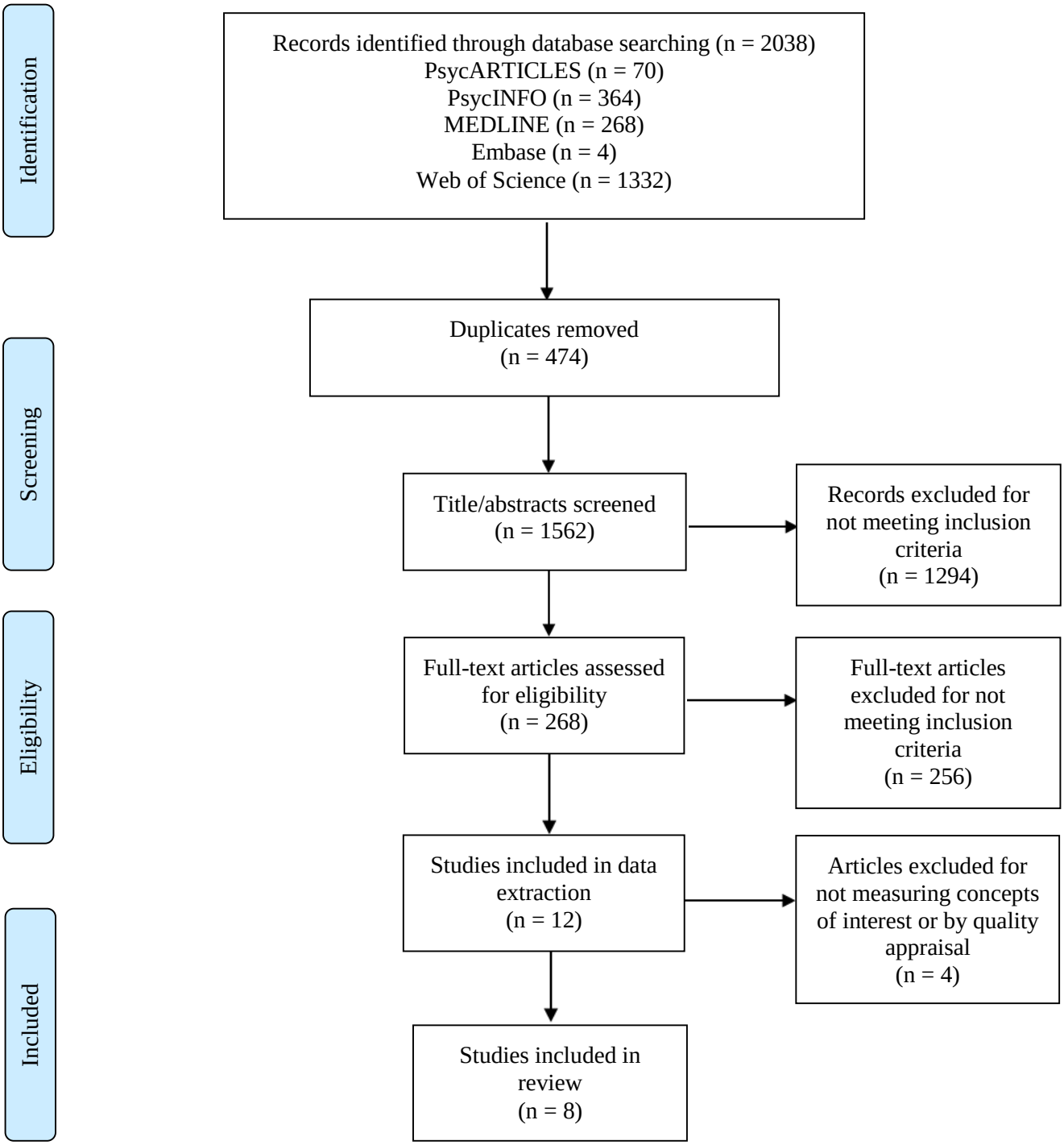
Study Selection

A total of 2038 articles were identified from the databases (see Figure 1). 474 articles were duplicates and were immediately excluded. 1562 abstracts and titles were screened, and 1294 of these were excluded for not meeting the specified criteria for stage 1. 268 full-text articles were assessed for eligibility in stage 2. 256 of these articles did not meet the inclusion criteria and were excluded. 12 articles were included for data extraction in stage 3. Upon completing data extraction, it became apparent that 3 of the articles did not measure any of the COI and were subsequently excluded. These articles were removed as they examined regular stress and burnout as opposed to STS and CF. A total of nine articles progressed to quality assessment in stage 4. Eight of the articles were deemed to be of acceptable quality and were included in the current narrative synthesis, whereas one article did not pass the screening question of the MMAT and was excluded from the current review. Seven of the articles were rated as “strong,” while one was rated as “moderate.” The one article (Diehm et al., 2019) that was given a “moderate” rating as part of quality assessment lost points for not outlining information that was necessary in considering the key findings. Using level of evidence guidelines (Ackley et al., 2008, p. 7) each of the eight articles were rated “Level VI” given that every article was either a single descriptive or qualitative study. It was therefore

not possible to compare the articles according to levels of evidence.

Figure 1

PRISMA Flow Diagram



Study Characteristics

The information that was extracted from the eight articles in the narrative synthesis included the citation (the authors and the year of publication), the geographical location of the study, participants, research methodology, data collection, analysis methods, the outcome of the quality assessment, and the key findings. This data is described narratively below and presented in Table 1. The eight research articles were published between 2007 and 2020. Two of the studies were conducted in the United States of America (USA), two in the United Kingdom (UK), two in New Zealand, and one in Australia, and South Africa, respectively. The articles consisted of five quantitative and three qualitative studies. Various disciplines of psychologists were included in the studies, including clinical, counseling, and school psychologists, as well as psychologists that were non-specified. With regards to the primary data collection method, five of the articles used surveys, whereas the other three studies used semi-structured interviews. Various psychometric instruments were used to measure ST, including the Secondary Traumatic Stress Scale (STSS), the Professional Quality of Life Scale (ProQOL), and custom-made questionnaires. Qualitative methods used to investigate ST included Interpretative Phenomenological Analysis (IPA) and Thematic Analysis (TA).

Quantitative Studies

The first of the quantitative papers examined the degree to which various stressors affected professional psychologists' ability to function effectively (Bearse et al., 2013). A survey was administered to 260 psychologists throughout the USA and measured the impact of stressors like VT/CF. The authors queried sample representativeness in the limitations as a result of the age and ethnicity of the sample. Psychologists were asked to rate the degree that they felt VT/CF affected their ability to function effectively as a psychologist on a 5-point Likert scale that ranged from 1 (never) to 5 (often). On average, VT/CF was rated with a mean of 1.92 (SD = 0.86) by psychologists, which was below the scale's midpoint of 2.5. While the measure appeared to have face validity, it was created specifically for this study

Table 1. *Summary of Included Studies*

Authors and Year	Country	Sample Characteristics	Type of Research	Data Collection and Analysis	Quality Rating	Key Findings
Bearse et al. (2013)	The United States of America	260 professional psychologists on the American Psychological Association (APA) directory profile	Quantitative	Survey, descriptive statistics	Strong	On a 5-point Likert scale that ranged from 1 (*never*) to 5 (*often*). Vicarious Trauma/Compassion Fatigue (VT/CF) was rated as follows (M = 1.92, SD = 0.86). Female psychologists reported that VT/CF had a greater impact on their work than male psychologists, t (251) = 2.26, p = .024
Cramond et al. (2020)	The United Kingdom	12 clinical psychologists working with adults with cancer in a palliative care setting	Qualitative	Semi-structured interviews, Interpretative Phenomenological Analysis (IPA)	Strong	Clinical psychologists' experiences were characterised by the lasting impact of the work on the self, the nature of the therapeutic relationship, and the meaning they attributed to palliative care
Diehm et al. (2019)	Australia	78 registered psychologists. The majority were either clinical or counselling psychologists who frequently	Quantitative	Survey, descriptive statistics, correlation, regression, and moderation analysis	Moderate	On average, psychologists reported "mild" Secondary Traumatic Stress (STS) on the Secondary Traumatic Stress Scale (STSS). Some psychologists reported "moderate" (N = 11, 9%), "high" (N = 5, 4%), and "severe" (N = 16, 13%) STS. STS was moderately and positively correlated with the frequency

		work with trauma				of exposure to graphic details of trauma ($r = .30$, $p < .001$) and weekly hours in clinical contact with survivors of trauma ($r = .41$, $p < .001$)
Manning-Jones et al. (2017; 2016)	New Zealand	70 psychologists	Quantitative	Survey, descriptive statistics, Multiple Analysis of Variance (MANOVA), quadratic hierarchical multiple regression	Strong	Psychologists did not meet the threshold for STS on the STSS and reported that they experienced "little or no STS" ($M = 27.60$, $SD = 7.85$). Psychologists reported the highest utilisation of coping strategies when compared to other mental health professionals. A curvilinear model was found to best explain the relationship between STS scores and vicarious posttraumatic growth (VPTG). Initially, STS and VPTG increased correspondingly, but once VPTG plateaued any further increases in STS beyond this point were associated with decreased VPTG
Merriman & Joseph (2018)	The United Kingdom	9 counselling psychologists working with trauma survivors	Qualitative	Semi-structured interviews, IPA	Strong	Psychologists reported significant challenges when working with trauma survivors that included trying to make sense of horrific human actions, negotiating complex interpersonal dynamics, and managing ethical dilemmas

Sprang et al. (2007)	The United States of America	78 psychologists	Quantitative	Survey, descriptive statistics, MANOVA, regression	Strong	Psychologists scored 10 on the CF subscale of the Professional Quality of Life Scale (ProQOL), which was below the suggested cut-off of 17. The percentage of clients with post-traumatic stress disorder (PTSD) predicted higher levels of CF for psychologists
Sui & Padmanabhanunni (2016)	South Africa	6 psychologists (4 clinical and 2 counselling psychologists) who work predominantly with trauma and PTSD	Qualitative	Semi-structured interviews, thematic analysis	Strong	Psychologists reported experiences of vicarious trauma and positive transformations. Psychologists reported disruptions in schemas, symptoms of PTSD, and somatic symptoms

and was not a validated scale, which was noted as a limitation as part of quality assessment. With regards to the impact of VT/CF on therapeutic efficacy, a significant difference was found between males and females, $t(251) = 2.26$, $p = .024$. Women reported that VT/CF had a greater impact on their work than men as they reported it with a higher frequency (female $M = 2.0$, male $M = 1.8$) but these levels of VT/CF were still relatively low given that responses could range from 1 to 5. Standard deviations for these figures were not provided so effect sizes could not be calculated. Diehm et al. (2019) administered a demographic questionnaire and the STSS to 78 registered psychologists. The STSS has good reliability and validity (Bride et al., 2004). On average, the psychologists in the study had 25 clients ($SD = 18.14$) with a history of trauma on their caseload, an average of 9.69 ($SD = 7.77$) clinical hours with trauma survivors a week, and more than 50% of psychologists reported being exposed to graphic details of trauma at least once every week. The sample also had an average of 10 years ($SD = 8.46$) of experience of working with trauma survivors. The range of responses for these demographic statistics were not provided by the authors. On average, psychologists reported "mild" levels of STS using the recommended scale interpretation provided by Bride (2007). However, 11 participants (9%) reported "moderate" levels of STS, 5 (4%) indicated "high" STS, and 16 (13%) reported "severe" STS. STS was positively and moderately correlated with both the number of weekly hours spent with survivors of trauma, $r = .41$, $p < .001$, and the frequency of exposure to graphic details of trauma, $r = .30$, $p < .001$. The percentage of trauma clients seen by psychologists was not found to correlate with STS. Manning-Jones et al. (2016, 2017) are represented twice in this review, with two separate articles that both reported data from the same sample. As part of a survey, the STSS was administered to 70 psychologists. On average, psychologists were one-point shy (on an 85-point scale) of reaching the clinical cutoff for "mild" STS and therefore scored within the "little or no STS" range. Psychologists had the lowest levels of STS when compared to other

health professionals (doctors, nurses, social workers, and counselors). Only the scores between social workers and psychologists were found to differ significantly ($p = .01$, $d = 0.48$). Psychologists in the sample also reported the highest utilization of coping strategies and the joint lowest levels of exposure to working with trauma clients. Levels of STS were found to increase alongside post-traumatic growth (PTG) scores and a curvilinear model best explained the relationship between these two variables. STS predicted PTG, as they increased together, but at a certain point PTG plateaued, and any further increases in STS after this point resulted in decreased PTG. The curvilinear relationship was only found to occur with psychologists, $F(1,67) = 7.22$, $p < .01$ and none of the other health professionals. This suggests that there is something unique about psychologists that facilitated the observed curvilinear relationship. The last of the quantitative studies included in the current review was completed by Sprang et al. (2007). They examined a sample of 78 psychologists as part of a larger sample of professionals by administering the ProQOL. On average, psychologists scored 10 on the CF subscale. Higher scores on the CF subscale of the ProQOL indicate a higher risk for CF. While no clinical threshold is specified, psychologists were below the cutoff score of 17 (Stamm, 2005). For the entire sample, young age, female gender, a higher educational degree, less clinical experience, and a higher percentage of clients with PTSD predicted higher levels of CF.

Critical Appraisal & Synthesis of Quantitative Studies

A key limitation of the quantitative studies is that they had small sample sizes. Some studies only provided frequencies or mean scores of the COI in psychologists (Bearse et al., 2013; Manning-Jones et al., 2016, 2017). This is, however, understandable given that the research aims of those studies differed from the aims of the current review. The variety of conceptual foci in the articles was noteworthy as the research aims of the studies varied widely, with none of articles examining the prevalence of any of the COI in psychologists as

a primary aim. In some of the studies, certain pieces of information were missing that made it difficult for readers to complete a critical appraisal (e.g., Bearse et al. reported no effect sizes with regards to gender differences). With one exception, all of the quantitative studies used validated measures of the COI. The unvalidated scale used by Bearse et al. made it difficult to ascertain whether VT/CF was actually present. The outcome measures were therefore of limited value in addressing one of the aims of the current review, as the prevalence of the COI could not be reported. Each of the quantitative papers used a form of survey as part of data collection. Only one psychometric measure – the STSS – was used across multiple studies, which happened to be the only measure that identified ST above the clinical threshold (Diehm et al., 2019). The other study that used the STSS (ManningJones et al., 2016, 2017) reported sub-threshold ST. The majority of the included papers examined psychologists as part of larger samples, whereas two articles examined psychologists independently (Bearse et al., 2013; Diehm et al.). No observable differences were noted between articles that focused exclusively on psychologists or those that investigated psychologists as part of larger samples of mental health professionals. This was also the case when studies were compared according to quality rating. While all of the included articles were deemed to be of acceptable quality following quality appraisal, the only study (Diehm et al.) that reported ST in psychologists did not achieve a "strong" quality rating. This finding may have therefore been influenced by methodological issues (a risk of non-response bias as indicated by quality appraisal) and needs to be considered with caution. Other included articles with stronger quality ratings that used the same psychometric measure (Manning-Jones et al.) did not report STS in psychologists. When the Diehm et al. paper is examined by itself the most notable feature that separates it from the other studies is the reporting of psychologists' level of exposure to trauma. Psychologists in that sample were found to have high levels of exposure to traumatic material as they worked with clients with a history of

trauma “frequently” (p. 199). If this claim is assumed as being true, despite no comparative data on rates of typical trauma exposure being provided, then it suggests a unique feature that may have contributed to psychologists’ reporting clinical levels of STS. This finding tentatively suggests that psychologists who were more frequently exposed to and who spent more time with trauma clients were more likely to develop STS. To summarize, a key finding of this narrative synthesis was the notable absence of quantitative data that lent itself to addressing the research question of the prevalence of the COI in psychologists. The small amount of available evidence on this topic has many limitations, listed above, that prevent the drawing of any definitive conclusions with regards to prevalence rates of the COI in psychologists.

Qualitative Studies

Cramond et al. (2020) completed semi-structured interviews with 12 clinical psychologists working with adults with cancer in a palliative care setting. Three superordinate themes were identified using IPA. The first theme captured the balance between nourishment and depletion that working with terminal patients brings. Three participants felt that working in this setting was a “privilege” and one described it as “humbling” but despite this, participants also reported an internalization of responsibility for the psychological well-being of their clients. The second theme captured the existential impact on the self that working in a palliative care setting brings. Psychologists described how they were affected and changed as a result of their work, and how they readily identified and empathized with their clients. Four participants referred to the concept of CF in those exact words, whereas other participants described experiences in other words that could be understood as CF, such as rumination, insomnia, and feeling detached from clients as a result of their work. An accumulative effect of depletion from hearing experiences of imminent death was observed, which led to psychologists utilizing defense mechanisms to cope. The

final theme was the respondent's feelings surrounding a perceived expectation to be able to manage emotive situations, and to contain the emotions of others around them. While there were draining aspects of the job, overall psychologists felt that the positives outweighed the negatives. Experiences of CF that evoked feelings of shock and shame were reported, but equally, psychologists stated that they were able to monitor and manage these experiences. Merriman and Joseph (2016) conducted interviews with nine counseling psychologists working with trauma survivors in the UK. Using IPA, they identified two superordinate themes that revealed a number of negative effects of working with trauma survivors and the way in which psychologists developed their therapeutic selves over time. Each of the psychologists outlined negative emotional responses to hearing stories of trauma, including fear, horror, sadness, and anger, as well a heightened response for potential threats, an increased distrust of others, and a greater vulnerability to distress. Respondents also described feelings of desensitization and having to use coping mechanisms like "switching off" to ensure their own well-being, or trying to limit having too many clients with certain traumas on their caseloads. The other superordinate theme consisted of psychologists reporting a sense of development in their ability to work with traumatic material. The last of the qualitative studies used TA on transcripts of semi-structured interviews with 6 psychologists (4 clinical and 2 counseling) who work predominantly with trauma and PTSD (Sui & Padmanabhanunni, 2016). Two themes were identified that captured the psychological impact of working with trauma survivors, one positive, and one negative. The negative theme, "Experiences of Vicarious Trauma," outlined how every one of the participants experienced repeated exposure to graphic details of traumatic events, and the lasting effects of this. Participants reported disruptions in cognitive schemas, sub-clinical symptoms of PTSD, persistent negative emotional states, intrusive thoughts and memories, changes in arousal, and somatic reactions. The positive transformations involved psychologists describing how they

had a greater appreciation for their lives and relationships, as well as renewed feelings of resilience and personal strength from their work.

Critical Appraisal & Synthesis of Qualitative Studies

The qualitative papers added a new dimension of understanding by illuminating how the COI are being experienced by psychologists. The qualitative nature of these studies meant that none of the COI could be quantified but these papers indicated the presence of VT for psychologists working with trauma populations. A noted limitation of the qualitative studies, and an important consideration, is that psychologists may actually be experiencing VT more severely than reported, as those most badly affected may have already left this area of work. Other confounding factors exist that may limit conclusions drawn from the findings of the qualitative articles. Cramond et al. (2020) reported that their sample of psychologists was relatively inexperienced. Variables that may have influenced findings and that were not controlled for included the length of time that individuals worked in specific settings, how much of participants' roles involved clinical work when compared to other duties, and individual participant characteristics. Individual differences are an important consideration given that these studies used qualitative research designs. While small sample sizes are entirely appropriate for qualitative research design, the impact of individual differences require attention. Merriman & Joseph (2018) acknowledged this limitation and how additional demographic data on participants would have been helpful, such as information on supervision arrangements, the theoretical orientation of the psychologists, and their years of experience. Cramond et al. (2020) was the only qualitative paper with a sample of psychologists not working directly with trauma. This unique characteristic may explain why respondents in this study were the only ones who reported being able to manage symptoms of CF. It is therefore at least likely that symptoms of CF were not clinically significant in this sample of psychologists. The two other papers (Merriman & Joseph, 2018; Sui &

Padmanabhanunni, 2016) shared a common factor with regards to client population, as both samples were composed of psychologists who worked with trauma directly. Psychologists in those studies worked with traumas that included sexual and physical abuse, PTSD, motor vehicle accidents, terrorism, natural disasters, and experiences of military combat. The findings from these two papers indicated that working with trauma had significant negative consequences for psychologists, whereas psychologists working in palliative settings continued to be able to provide effective care to their clients despite experiencing difficulties associated with CF. Further examination of the client population of these studies may offer an explanation as to why this was the case. Psychologists working in oncology settings are regular witnesses to clients experiencing intense suffering and pain but this differs from trauma work and the repeated exposure to retellings of traumatic experiences associated with that work. The nature of the therapeutic work with these client populations may be a factor that explains the discrepancy between psychologists involved with different client cohorts. All of the qualitative articles achieved a "strong" rating as part of quality appraisal and could therefore not be compared according to the quality rating. No differences were observed when studies were evaluated according to the discipline of the psychologist or the type of qualitative design used in the study. With regards to outcomes all three qualitative studies had themes related to positive transformations resulting from difficult work experiences (Cramond et al., 2020), such as an increased awareness of personal strength, a sense of personal growth (Sui & Padmanabhanunni, 2016), and a sense of personal development (Merriman & Joseph, 2018). To conclude, the psychologists in the qualitative papers reported symptoms congruent with VT/CF. The types of reactions, severity of symptoms, and ability to manage difficulties arising from therapeutic work differed according to the clients that the psychologists supported.

Discussion

The current systematic review identified eight papers that examined the prevalence of and variables associated with the COI in psychologists. With regards to the first aim of the current review, prevalence rates of the COI in psychologists could not be determined. Reasons for this included a scarcity of studies that reported on prevalence rates, as well as various methodological factors including a wide range of outcome measures, psychometric measures not suited to the reporting of prevalence rates, and the reporting of mean scores over the percentages of psychologists who met clinical cutoffs. Due to these limitations, it was not possible to report a single representative figure or rating for any of the COI in psychologists. While no definitive prevalence rate is evidenced by the articles included in the current review, the studies tentatively suggest that the COI are generally not causing clinically significant difficulties for psychologists. A key finding that was highlighted by the current review was the paucity of research that exists in this area. Inclusion criteria for the current review were purposefully broad to increase the number of articles available for extraction. Despite having no restrictions on publication dates, types of research designs, outcome measures, psychologist characteristics (including discipline, geographical location, or work setting) and the inclusion of four different COI – only eight papers were identified from the selected databases. This supports previous findings from the literature base as systematic reviews on the presence of VT, STS, and CF in physicians (Nimmo & Huggard, 2013) and in alcohol and other drug clinicians (Huggard et al., 2017) also noted the scarcity of available research on these concepts. It appears that research on these concepts has continued to receive little attention by researchers despite the significant negative consequences and impacts associated with them.

An important finding was the significant minority of psychologists in the included studies that reported high ST scores. While Diehm et al. (2019) found that the majority of the

psychologists in their sample had “mild” levels of STS, a considerable 13% reported “severe” levels of STS. When the other articles where psychologists reported symptoms concurrent with the COI are grouped together, a common variable is found between them – every paper described psychologists who were working with trauma directly. This included all of the qualitative studies, whose samples included psychologists that worked with trauma survivors, PTSD, or in a palliative setting, who all reported experiences of ST. Some of the psychologists in the qualitative studies explicitly used terms like “CF” to describe their experiences, which suggests that for psychologists who work with trauma, the COI may be more severe. While it is not possible to quantify a rating for the various COI given that these studies were all qualitative, themes related to VT/CF were present throughout all of the articles. More research is needed to quantify rates of the COI in psychologists working with trauma. This key finding supports previous research that suggests that it is working with traumatic material that increases the risk for VT (McCann & Pearlman, 1990) and not the other duties of psychologists. Not all psychologists work with trauma and this variable may offer a potential explanation as to why the COI did not generally have a clinically significant impact on psychologists examined by the current review despite them being an at-risk group. While working with trauma was found to increase the likelihood of developing STS, an interesting finding was that psychologists also reported positive changes resulting from their work with trauma. In the qualitative studies, psychologists outlined transformations that resemble definitions of vicarious PTG. This finding is supported by Manning-Jones et al. (2017), as they reported a curvilinear relationship between STS and PTG, with an identified threshold where increases in STS stop facilitating growth. This relationship was only observed in psychologists and no other health professionals, which suggests that there may be something unique about the role of a psychologist. Whether this is due to their training, the work that they do, the supervision they receive, or some other unknown factor remains to be

seen. The authors hypothesized that increased contact with trauma survivors, exposure to detailed accounts of traumatic narratives, and the in-depth exploration of traumatic experiences may put psychologists at a higher risk of STS when compared to other disciplines (Manning-Jones et al.). This makes logical sense given that VT was first conceptualized to explain the effects of working with clients who have histories of trauma (Sabin-Farrell & Turpin, 2003). While psychologists work in a wide range of settings, and with varying populations, it seems to be that it is listening to stories of trauma, or helping clients to process traumatic material, which is a key risk factor.

Other variables that were found to influence the likelihood of a psychologist developing the COI included a personal trauma history, perceptions regarding the psychologists own personal trauma resolution, a lack of social support, higher exposure to traumatic material (Diehm et al., 2019), a higher percentage of clients with PTSD, being young or female, a higher educational degree, less clinical experience, working in rural settings (Sprang et al., 2007), and higher levels of working directly with trauma (Manning-Jones et al., 2016, 2017). Feeling supported by others was found to act as a protective factor, as psychologists who did not have social support to draw from felt the effects of ST more severely. Taken together, these findings tentatively showcase areas worthy of further investigation for researchers looking to develop interventions to support psychologists who work with traumatized people. A protective factor could be psychologists' ability to successfully monitor and manage the effects of ST (Cramond et al., 2020). Psychologists were found to have the highest utilization of coping strategies when compared to other health professionals (Manning-Jones et al.) which might explain why psychologists are generally presenting with sub-threshold STS. Psychologists outlined strategies that they successfully implemented to manage the COI, such as limiting the number of clients with particular traumas on their caseloads (Merriman & Joseph, 2018), which are strategies that have

previously been found to be helpful in managing ST (Hesse, 2002).

Given that this is the first systematic review that investigated the prevalence of the COI in psychologists, it was not possible to compare the findings of the current review to previous research on this specific population. However, the finding that trauma work contributes to ST was previously reported in the literature (Cohen & Collens, 2013).

Limitations

Limitations for the current systematic review include the small sample sizes in the included articles. Some of the studies were of larger samples of many health professionals, but due to the specific aims of the current systematic review, psychologists were then extracted from those samples leading to small numbers. Some of the included articles did not achieve a "strong" rating in the quality assessment. Reasons for this varied, but removal of the weaker studies from the current narrative synthesis did not change the findings of the current systematic review. Additionally, some of the studies were cross-sectional, meaning that causal inferences are of limited value.

Implications

The implications of the current review are that professions working with trauma appear to be at an increased risk of developing STS and that they should pay increased attention to the management of the negative effects of the COI. Psychologists not working with trauma do not appear to be an atrisk group for the COI. Psychologists can minimize the negative effects of working with trauma by implementing strategies that have proven to be helpful, such as engaging in regular self-care and supervision (Hesse, 2002). The findings can likely be generalized to other professions with similar roles to psychologists, as many of the identified risk factors were not specific to psychologists, but rather to practitioners working

with trauma. The noted risk factors will be of particular interest to clinicians and managers of health care professionals looking to monitor and address the COI within clinical practice.

Conclusion

Research has previously examined the prevalence of the COI in various professions. However, this is the first systematic review that investigated the COI in psychologists. Due to the small number of studies examining rates of the COI in psychologists and various methodological factors that did not lend themselves to the reporting of the COI for this cohort, it was not possible to determine prevalence rates of the COI for psychologists. The available evidence appears to suggest that psychologists are managing symptoms of the COI with a notable exception – psychologists working with trauma. This finding suggests that it is the context of the work, as opposed to the discipline of the professional that places individuals at increased risk for the COI.

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