REVIEW PAPER

A Systematic Review of Secondary Traumatic Stress and Compassion Fatigue in Teachers

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Abstract

When teachers care for children with trauma histories, they are at risk of developing compassion fatigue (CF), or a reduced empathic capacity (Hupe and Stevenson in J Child Custody Res Issues Pract 16(4):364–386, 2019. https://doi.org/10.1080/15379418.2019.1663334). They may also develop secondary traumatic stress (STS), a secondary condition resulting from a person learning about details of a traumatic event experienced by someone in their care (Essary et al. in Kappa Delta Pi Record 56(3):116–121, 2020). While CF and STS have been studied widely in healthcare and mental health professionals (Baird and Kracen in Couns Psychol Q 19(2):181–188, 2006; Caringi et al. in Adv Sch Ment Health Promot 8(4):244–256, 2015. https://doi.org/10.1080/1754730X.2015.1080123; Cieslak et al. in Psychol Serv 11(1):75–86, 2014), STS and CF have been understudied in the teaching profession (Caringi et al., 2015; Christian-Brandt et al. in Child Abuse Neglect 110(3):104437, 2020; Hupe & Stevenson, 2019). As such, we sought to complete a systematic review of the literature to answer two questions: (1) To what extent are CF and STS being studied in teachers?; and (2) How have CF and STS been studied in teachers? Qualitative data analysis led to the emergence of four themes across all included studies: (1) conceptualization of CF and STS; (2) teachers are at risk of developing CF and STS; (3) varying approaches can mitigate the risk of CF and STS in teachers; and (4) there is limited research on CF and STS in teachers. Limitations and directions for future research and practice are described.

Keywords Compassion fatigue · Secondary traumatic stress · Teachers · Mental health

Introduction

By its very nature, teaching is a "helping profession", yet teaching has been ranked as one of the most stressful occupations (Johnson et al., 2005). Educators are consistently reporting higher levels of behavioral, psychological, and physiological symptomatology from work-related stress and are reluctant to discuss their concerns with employers (Education Support Partnership [ESP], 2020). Further, behavioral and mental health challenges displayed by children inherently impact the mental health of their classroom teachers (Eddy et al., 2020). The COVID-19 pandemic has only exacerbated teacher stress, as teachers had to pivot to providing instruction in an online format, often without training, and endured a significant increase in workload to make the transition successful (Kaden, 2020).

Compounding teacher stress in the school setting relates to working with students with significant trauma histories. While prevalence rates vary, it has been estimated that approximately 50–60% of children have experienced some type of adverse or traumatic experience in the USA by the time they reach adulthood (Centers for Disease Control & Prevention, 2019; Merrick et al., 2018; National Child Traumatic Stress Network [NCTSN], 2018; Porche et al., 2016). Children with trauma histories often display significant behavioral, socioemotional, and/or academic challenges in the classroom, and if left untreated, trauma may continue to negatively impact student well-being (Bell et al., 2013) and may result in a need for special education services (NCTSN, 2018; Tuchinda, 2020). About 30% of adolescents with emotional and behavioral disorders show signs of posttraumatic stress (Mueser & Taub, 2008), suggesting teachers who work with students receiving special education may

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have a greater likelihood of working with youth who have experienced trauma.

Trauma is also relevant amongst students from neighborhoods with lower socioeconomic stability (Assari, 2020) and students from minoritized groups (Myers et al., 2015). Low-income special education legal service providers reported high levels of trauma in the youth they serve (Tuchinda, 2020), whereas youth from highly educated families with a higher income were found to be less likely to be exposed to childhood trauma, although these same effects were diminished amongst Black families as compared to White families (Assari, 2020). Experiences of discrimination, adversity, and chronic stress from systemic inequities facilitate the increased likelihood that youth from minoritized backgrounds will be exposed to, or experience, a traumatic event (Myers et al., 2015). Youth from Indigenous communities may also be more likely to experience trauma due to historical trauma (a term used to describe the impact of colonization and historical oppression on Indigenous people; Kirmayer et al., 2014). Intergenerational trauma and systemic oppression trauma also disproportionately impact marginalized populations (Goodman, 2016). Another advancing theory is related to political trauma, or "trauma caused by events in the public sphere" (Sondel et al., 2018, p. 176), such as events related to recent political elections and increased instances of xenophobia, hate crimes, and hate speech immediately following the 2016 presidential election (Sondel et al., 2018). While an in-depth review is outside the purpose of this manuscript, it is important to recognize the intersectionality of trauma and marginalized populations, including the ways in which systemic and institutionalized oppression may be considered traumatic experiences (Goodman, 2016) for educators themselves as well as for their students.

Defining Secondary Traumatic Stress and Compassion Fatigue

Secondary traumatic stress (STS) and compassion fatigue (CF) are constructs that originated in the mental health and healthcare profession (Sinclair et al., 2017) and are beginning to gain attention in the teaching profession. CF is defined as "a reduced empathic capacity or client interest manifested through behavioral and emotional reactions from exposure to traumatizing experiences of others" (Cieslak et al., 2014, p. 76) and typically occurs due to hearing about or providing support to someone who has experienced a traumatic event (Skovholt & Trotter-Mathison, 2016). Although originally conceptualized for mental health professionals, Figley's (1995) Compassion Stress and Fatigue Model introduces the multifaceted nature of CF. Foundational to the model is empathy, and CF is defined as the "cost" of the compassion and empathy displayed by individuals in helping professions. For teachers, this means caring for children with trauma histories—and bearing witness to the behavioral, socioemotional, and academic cost of being victims of trauma—which can lead to higher rates of CF (Hupe & Stevenson, 2019).

STS is defined as "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other—the stress resulting from helping or wanting to help a traumatized or suffering person" (Figley, 1995, p. 7). STS is considered to be a secondary condition resulting from a person learning about details of a traumatic event experienced by someone in their care, rather than experiencing a traumatic event personally (Essary et al., 2020). Cieslak et al. (2014) propose CF emerges from burnout and STS when service professionals are exposed to trauma on the job. Rates of prevalence for STS vary (Lawson et al., 2019). Specifically for educators, one study found 43% of teachers surveyed demonstrated symptoms related to STS (Koenig et al., 2017), while nearly 75% of adults reported symptoms in another study (Borntrager et al., 2012).

Often, STS and CF are not only conflated with each other, but with other related terms such as *vicarious trauma* and *burnout*. While a comprehensive discussion of these constructs is beyond the scope of this paper, it is important we distinguish these terms from STS and CF for the context of this study. *Vicarious trauma* occurs when a client or multiple clients disclose trauma and a clinician develops symptoms (e.g., intrusive imagery, arousal, avoidance, and negative cognitions) that can impact their professional or personal life (Branson, 2019). *Burnout* is an occupational construct that develops over time from chronic stressors on the job (Maslach, 2003; Schaufeli & Buunk, 2003) and has long been studied amongst teachers. Burnout has been found to influence a teacher's intent to leave the profession (Christian-Brandt et al., 2020) and has negative implications for students (Pas et al., 2012). While burnout and vicarious trauma develop from the accumulation of stressors, STS and CF can develop after only one exposure.

Obscurity in defining and differentiating CF and STS aligns with early research from other fields, demonstrating that the study of CF and STS in teachers is in its infancy. For example, amongst mental health providers, Figley (1995) first deemed CF and STS as synonymous, but Cieslak et al. (2014) later described how these constructs differ (Sinclair et al., 2017). Mental health and healthcare providers now suggest STS results from learning about the trauma someone in one's care experienced (Figley, 1995), while CF describes a reduced capacity for empathy due to working with people who have experienced trauma (Cieslak et al., 2014). Cieslak et al. (2014) suggest STS occurs first and gives rise to CF, which has emotional and behavioral impacts for those experiencing these challenges.

Compassion Satisfaction

Serving as a contrast to CF, Stamm (1997) first introduced the concept of *compassion satisfaction* (CS). CS is defined as a person's "satisfaction with and positive feelings of helping, as well as their sense of self-efficacy related to helping" (Christian-Brandt, 2020, p.2). Some also consider CS to be a measure of the extent to which individuals feel supported by their colleagues (Conrad & Kellar-Guenther, 2006). Preliminary evidence suggests CS may alleviate the impacts related to burnout and CF in some helping professionals such as nurses (Xie et al., 2021), mental health workers (Samios, 2018), and child protection workers (Conrad & Kellar-Guenthar, 2006) and, recently, has been examined more specifically among healthcare professionals during the COVID-19 pandemic (Ruiz-Fernández et al., 2020). However, this is also an area that has been understudied with teachers (Christian-Brandt et al., 2020).

Measures of CF, STS, and CS

The Professional Quality of Life Scale (ProQOL) is a measure used to examine these constructs (Stamm, 2010) and is one of the most commonly used measures in research (Cieslak et al., 2014; Geoffrion et al., 2019). Indeed, several studies in this systematic review utilized the ProQOL in their studies as we summarize and discuss below. The ProQOL was developed to specifically measure the constructs of CS, STS, and burnout within helping professions, including psychologists, trauma and disaster relief workers and therapists, social workers, nurses, and other professionals working with traumatized individuals (Geoffrion et al., 2019; Stamm, 2010). Measures specifically examining CF include the Compassion Satisfaction and Fatigue Test (CSFT; Figley & Stamm, 1996) and the Compassion Fatigue Questionnaire (CFQ; Figley & Kleber, 1995). As its name implies, the Secondary Traumatic Stress Scale (STSS; Bride et al., 2004) specifically measures STS via self-report items aligned with post-traumatic stress disorder symptomatology including intrusion, avoidance, and arousal (Bride et al., 2004). While the STSS has limited use with educators (e.g., Borntrager et al., 2012; Koenig et al., 2017), and modified versions were used in the studies we examined below, it was not originally normed on educators (Bride et al., 2004).

Study Purpose

Exploring and defining CF and STS, along with burnout and vicarious traumatization, has been a priority within both healthcare and mental healthcare professions to support these "helping professionals." Indeed, comprehensive reviews of STS and CF, including prevalence and interventions, have been examined for healthcare workers, first responders, and mental healthcare providers (Baird & Kracen, 2006; Beck, 2011; Bercier & Maynard, 2015; Caringi et al., 2015; Cieslak et al., 2014; Sinclair et al., 2017; Turgoose & Maddox, 2017). However, STS and CF have been understudied in education (Caringi et al., 2015; Christian-Brandt et al., 2020; Hupe & Stevenson, 2019; Koenig et al., 2017). Given the stressful nature of the teaching profession (Johnson et al., 2005), rate of students who have experienced trauma (NCTSN, 2018), prevalence of CF and STS in other helping professionals (Sinclair et al., 2017), and limited expanse of literature focusing specifically on teacher CF and STS, we sought to conduct a systematic review that could provide a foundational review of these constructs in relation to teachers. No systematic review to our knowledge includes—let alone focuses on—teachers. As such, we completed a systematic review of the literature to answer two questions: (1) To what extent are CF and STS being studied in teachers?; and (2) How have CF and STS been studied in teachers? We did not limit our review by focusing on whether teachers report experiencing CF or STS or specific interventions to address associated symptoms; rather, we broadly searched the literature base to assess the current state of research on teacher CF and STS to provide a systematic starting point to inform future research.

Methods

A systematic narrative review was conducted in place of a meta-analysis in order to review studies of diverse methodologies and constructs (Siddaway et al., 2019) and to formulate recommendations to drive future research and practice (Baumeister, 2013). Narrative reviews combine study results that use different methods and procedures to answer different questions (Baumeister, 2013), with no reference to the statistical findings in the studies (Siddaway et al., 2019). In this case, exploring studies that address CF and STS in teachers can promote an understanding of how these constructs have been studied in relation to teachers.

Literature Search and Selection

For this systematic review, we followed the guidelines set by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses [PRISMA] Statement (Page et al., 2021). We conducted two different initial searches: one that only addressed CF and one that addressed both CF and STS. For our CF search (Search 1), our search terms were (compassion fatigue) AND (teachers OR educators). For our combined search (Search 2), our search terms were (compassion fatigue OR secondary traumatic stress) AND (teachers or educators). We searched the Academic Search Complete, APA PsychARTICLES, Education Full Text, Education

Index Retrospective, ERIC, Professional Development Collection, Psychology and Behavioral Sciences Collection, Social Sciences Full Text, and Social Work Abstracts databases. Each database had different default search filters; thus, we adjusted the filters so that the title, abstract, subjects, and keywords were searched, but not the full text of the article. Because the constructs of CF and STS are relatively new in the education literature, we did not restrict the search by publication year. We restricted by publication type (i.e., peer-reviewed articles and dissertations were included for consideration; book chapters were excluded) and did not restrict by study methodology (i.e., quantitative, qualitative, and mixed method studies were included for review). Search 1 returned 344 results, of which 178 were unique studies, while search 2 returned 527 results, of which 276 were unique. There were two items that appeared in search 1 that did not appear in search 2. Because of this high degree of overlap, we combined the search results for eligibility and analysis.

We then screened the unique results from each search. For the purposes of this systematic review, we defined CF and STS according to the definitions set forth by Cieslak et al. (2014) and Figley (1995) as stated previously. We defined teachers as certified staff working in an early childhood through 12th grade setting. Articles that did not address CF and teachers in the title and abstract did not meet inclusion criteria for Search 1, and we therefore excluded them in this phase. However, if an article did not have CF and teachers in the title, yet these terms were addressed in the abstract, the article was included for consideration. For Search 2, we excluded all articles that did not address both teachers and either CF or STS. The second and third authors screened all articles separately and then met to discuss any differences until they reached consensus on all articles. We excluded 126 articles from Search 1 and 80 articles from Search 2 in this phase. At this point, we then combined the eligible articles from the two searches and removed duplicates, resulting in 82 articles to assess for eligibility.

For the eligibility search, we reviewed each article for our inclusion and exclusion criteria. The inclusion and exclusion criteria were agreed upon based on prior knowledge of the literature, our research questions, and study purpose (i.e., to assess the current status of primary research pertaining to CF and/or STS in teachers who work in early childhood through 12th grade school settings; Siddaway et al., 2019). After preliminary engagement with the literature search process, the authors met to revise and further define the boundaries of this review, resulting in the inclusion and exclusion criteria described below.

We divided the articles to be assessed evenly amongst the authors, who extracted the language of publication, research questions, participants, setting, definition of CF or STS, method, and results. All authors then met as a group to discuss the articles and reach consensus as to whether they met the inclusion criteria. The inclusion criteria were applied in the following order: article type (written in English, manuscript/not a book or book chapter, quantitative or qualitative original and empirical study), target population (early childhood through 12th grade teachers), target setting (public, private, or charter school), topics of study (CF and/ or STS). The two studies that were excluded because they were not in English, for example, were excluded prior to being reviewed for the remaining inclusion criteria. Study quality was not used as an exclusion criterion because quality is a term that can vary in meaning based on perception (Siddaway et al., 2019; Valentine & Cooper, 2008). However, study limitations were discussed amongst co-authors and included: limited generalizability of findings given small sample sizes, rural school districts, purposeful selection sampling, the use of qualitative methods, and the onset of the pandemic; no use of a control group; and low response rates to surveys. Ultimately, no studies were excluded based on the limitations or study quality, but this information was considered in presenting the findings from the included studies in our results. In sum, we excluded two articles that were not published in English, 34 articles that were not primary studies, 18 articles that did not have teachers as their only participants, and 11 articles that did not match our working definition of CF or STS. This resulted in 17 studies that were eligible for inclusion in our review.

Additionally, we reached out to school psychology and education research listservs to identify any potential grey literature. None of our correspondences yielded results that we had not already encountered. Once we determined our articles for inclusion, we performed an ancestral search of the reference lists for any other articles that we may have missed. Of the 27 potentially relevant articles identified in the ancestral searches, two of them met the screening and eligibility criteria outlined above and were not already included in our study. Of these two, one could not be located and so was not included. The other was an unpublished version of another article that was already in our screening search under a different name, so it was also excluded. See Fig. 1 for the PRISMA flowchart of our screening and inclusion process.

Data Analysis

This systematic review employed an inductive thematic analysis design (Braun & Clarke, 2006) common in educational research. Since a narrative review uses a qualitative approach to data extraction and synthesis (Baumeister, 2013), thematic analysis can adequately capture the breadth and depth of findings across articles. According to Braun and Clarke's (2006) recommendation to specify research assumptions, we disclose data analyzed according to our

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources

Identification of studies via databases and registers

Identification of studies via other methods

Identification

Records identified from:
 Databases (n = 344)*
 Databases (n = 527)**

Records removed *before screening*:
 Duplicate records removed (n = 166)*
 Duplicate records removed (n = 251)**

Records identified from:
 Organization listservs (n = 0)
 Social media (n = 0)
 Citation searching (n = 27)

Screening

Records screened
(n = 178)*
(n = 276)**

Records excluded
(n = 126)*
(n = 80)**

Reports for eligibility search
(n = 52)*
(n = 80)**

Duplicate reports removed
(n = 50)

Reports sought for retrieval
(n = 2)

Reports not retrieved
(n = 2)

Reports assessed for eligibility
(n = 82)

Reports excluded:
 Not in English (n = 2)
 Not primary study (n = 34)
 Not teachers (n = 18)
 Not school setting (n = 0)
 Not compassion fatigue or secondary traumatic stress (n = 11)

Reports assessed for eligibility
(n = 25)

Reports excluded:
 Not primary study (n = 9)
 Not teachers (n = 10)
 Not school setting (n = 1)
 Not compassion fatigue or secondary traumatic stress (n = 2)
 Already included (n = 3)

Included

Studies included in review
(n = 17)

*Search 1 (compassion fatigue)
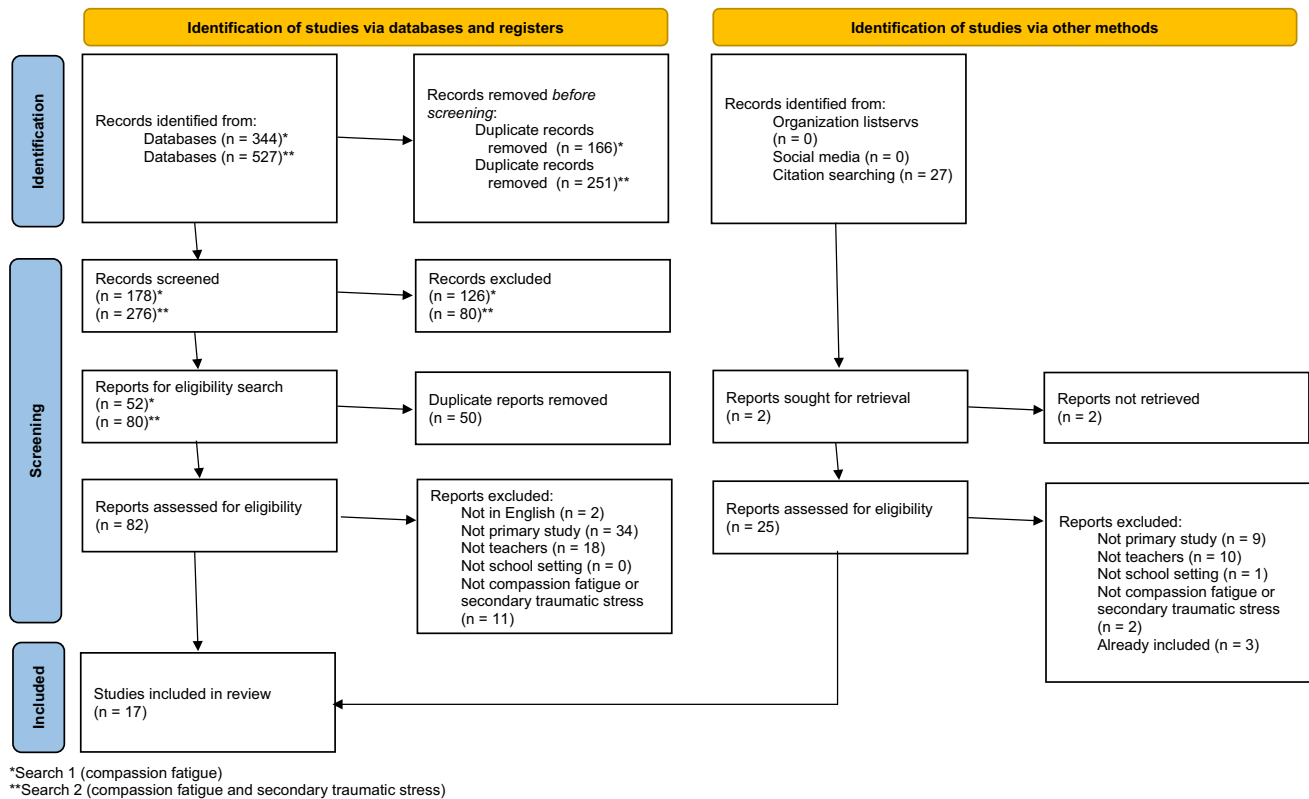**Search 2 (compassion fatigue and secondary traumatic stress)

Fig. 1 PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources

view of the bidirectional relationship between student behavior and teacher mental health (Eddy et al., 2020). We recognize that the effects of trauma on students can also impact those in the caregiver role (Figley, 1995).

Our data analysis consisted of six steps (Braun & Clarke, 2006). First, the primary author read the 17 included articles to immerse oneself in the data. The researchers who conducted the screening and eligibility searches had already extensively familiarized themselves with the data and progressed to the second step of analysis. Second, each of the included articles was read by two of the researchers, who highlighted interesting findings, or codes. Possible codes were recorded by each reviewer in a separate document. Third, each reviewer independently grouped their codes into categories based on shared characteristics. Fourth, we met as a research team to review initial codes and distinguish categories. Fifth, we grouped the categories into four broad themes and ensured each code fit within one category and one overarching theme. Sixth, data extracts from each article that capture the essence of the themes were combined with the narrative to tell a story about the identified articles examining CF and/or STS in teachers. Figure 2 demonstrates our data analysis process using one of the included articles. The final themes are described in detail below.

Results

Descriptive Results

The final set of included articles was comprised of 17 studies (see Table 1 for the characteristics of the included studies). Six studies ($n = 6$) were peer-reviewed journal articles; the remaining 11 articles ($n = 11$) were dissertations. The year of the publications ranged from 2012 to 2020. One study ($n = 1$) was conducted in Turkey, one in Israel ($n = 1$), and the remaining studies ($n = 15$) took place in the USA. Sample sizes of the studies ranged from 5 to 260 (mean = 102 participants). Four studies ($n = 4$) had small sample sizes, ranging between 5 and 15 participants. Four studies ($n = 4$) had moderate sample sizes between 37 and 65, and nine studies ($n = 9$) had large sample sizes over 100 (range = 111–260). Studies took place in early childhood settings ($n = 3$), elementary settings ($n = 3$), and secondary settings ($n = 2$). One study ($n = 1$) took place in schools that enrolled students in grades K-8, three studies ($n = 3$) included participants teaching across levels, and five studies ($n = 5$) did not identify the level at which participants taught. General education teachers were the focus of two studies ($n = 2$) and four studies ($n = 4$) focused exclusively on special education teachers.

Fig. 2 Data Analysis Procedures Applied to Example Article (Abraham-Cook, 2012)

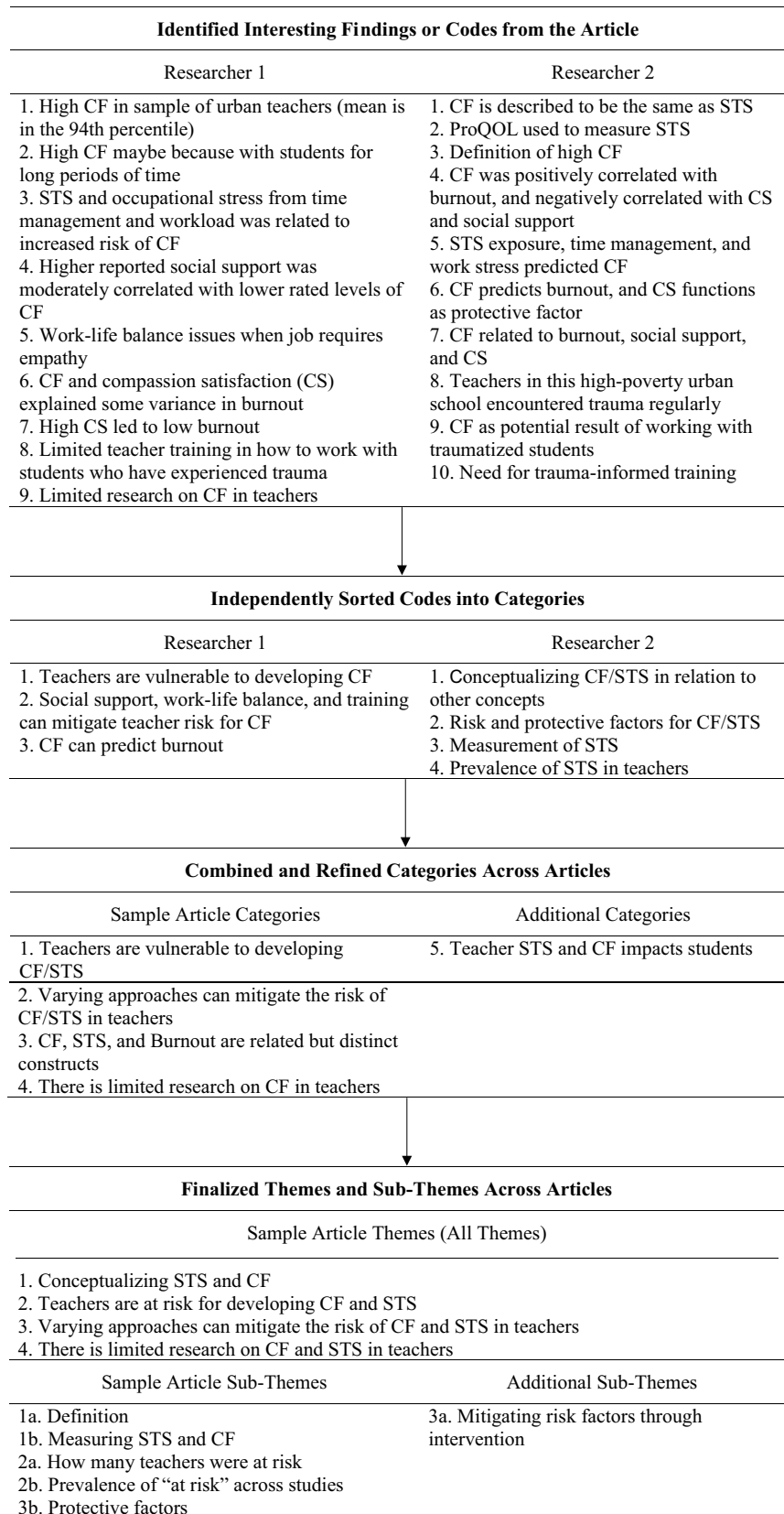*Data Analysis Procedures Applied to Example Article (Abraham-Cook, 2012)*

Identified Interesting Findings or Codes from the Article

Researcher 1	Researcher 2
1. High CF in sample of urban teachers (mean is in the 94th percentile) 2. High CF maybe because with students for long periods of time 3. STS and occupational stress from time management and workload was related to increased risk of CF 4. Higher reported social support was moderately correlated with lower rated levels of CF 5. Work-life balance issues when job requires empathy 6. CF and compassion satisfaction (CS) explained some variance in burnout 7. High CS led to low burnout 8. Limited teacher training in how to work with students who have experienced trauma 9. Limited research on CF in teachers	1. CF is described to be the same as STS 2. ProQOL used to measure STS 3. Definition of high CF 4. CF was positively correlated with burnout, and negatively correlated with CS and social support 5. STS exposure, time management, and work stress predicted CF 6. CF predicts burnout, and CS functions as protective factor 7. CF related to burnout, social support, and CS 8. Teachers in this high-poverty urban school encountered trauma regularly 9. CF as potential result of working with traumatized students 10. Need for trauma-informed training

Independently Sorted Codes into Categories

Researcher 1	Researcher 2
1. Teachers are vulnerable to developing CF 2. Social support, work-life balance, and training can mitigate teacher risk for CF 3. CF can predict burnout	1. Conceptualizing CF/STS in relation to other concepts 2. Risk and protective factors for CF/STS 3. Measurement of STS 4. Prevalence of STS in teachers

Combined and Refined Categories Across Articles

Sample Article Categories	Additional Categories
1. Teachers are vulnerable to developing CF/STS 2. Varying approaches can mitigate the risk of CF/STS in teachers 3. CF, STS, and Burnout are related but distinct constructs 4. There is limited research on CF in teachers	5. Teacher STS and CF impacts students

Finalized Themes and Sub-Themes Across Articles

Sample Article Themes (All Themes)

1. Conceptualizing STS and CF
2. Teachers are at risk for developing CF and STS
3. Varying approaches can mitigate the risk of CF and STS in teachers
4. There is limited research on CF and STS in teachers

Sample Article Sub-Themes	Additional Sub-Themes
1a. Definition 1b. Measuring STS and CF 2a. How many teachers were at risk 2b. Prevalence of "at risk" across studies 3b. Protective factors	3a. Mitigating risk factors through intervention

Table 1 Description of included studies

Study	Source	Location	Sample	Construct(s) studied	Research design	Measure of CF/STS
Abraham-Cook (2012)	ProQuest Dissertations	USA	111 pre-k through 12th grade educators in public schools in Newark, NJ	Both CF and STS	Correlational	Professional Quality of Life Rating Scale (ProQOL); Teacher Stress Inventory
Anama-Green (2012)	Explore	USA	144 teachers in Eastern Kentucky public schools	STS	Correlational	ProQOL
Anderson et al. (2021)	Frontiers in Psychology	USA	57 teachers from 32 different schools in the Pacific Northwest	STS	Explanatory sequential mixed-methods	Secondary Traumatic Stress Scale (STSS)
Bozgeyikli (2018)	Universal Journal of Educational Research	Turkey	238 special education teachers in Turkey	CF	Correlational	ProQOL (adapted to Turkish); New Psychological Needs Scale
Brown (2016)	ProQuest Dissertations	USA	37 teachers at 5 therapeutic preschools in California	STS	Mixed-Methods	ProQOL; Qualitative Interviews
Christian-Brandt et al. (2020)	Child Abuse and Neglect	USA	224 elementary teachers in the Pacific Northwest	STS	Correlational	ProQOL
Chun (2019)	ProQuest Dissertations	USA	12 current and former teachers of students with emotional disabilities in Hawai'i	CF	Qualitative	Compassion Fatigue and Satisfaction Self-Test (adapted from C.R. Figley); Qualitative Interviews
Denham (2018)	ProQuest Dissertations	USA	172 high school teachers in the US with direct student contact	STS	Quantitative Comparative	STSS
Gomez (2020)	ProQuest Dissertations	USA	65 elementary teachers in an urban school district	Both CF and STS	Cross-Sectional	ProQOL
Grybush (2020)	ProQuest Dissertations	USA	147 teachers working in 19 Title-I elementary schools	STS	Quantitative	ProQOL
Hoffman et al. (2007)	Journal of Ethnographic and Qualitative Research	USA	5 middle-school special education teachers	CF	Qualitative	Semi-structured interviews
Lepore (2016)	ProQuest Dissertations	USA	37 early childhood teachers	Both CF and STS	Longitudinal Mixed-Methods	ProQOL, Index of Teaching Stress; Interviews
Levkovich and Gada (2020)	Asia–Pacific Journal of Research in Early Childhood Education	Israel	15 preschool teachers in Israel	CF	Qualitative	Semi-structured interviews
Peterson (2019)	ProQuest Dissertations	USA	6 teachers at a trauma-informed school	CF	Qualitative	Focus group; individual interviews
Schepers (2018)	ProQuest Dissertations	USA	115 teachers at a school district in the High Plains region	STS	Mixed-Methods	Researcher-developed measure of STS; interviews
Simon (2019)	ProQuest Dissertations	USA	150 teachers from 6 urban public schools	STS	Correlational	ProQOL

Table 1 (continued)

Study	Source	Location	Sample	Construct(s) studied	Research design	Measure of CF/STS
Steen (2019)	ProQuest Dissertations	USA	263 K-12 teachers in one school district in central Florida	CF	Correlational	ProQOL; Teacher Stress Inventory

Eight studies ($n = 8$) did not distinguish between regular or special education teachers (e.g., "All certified teachers…had an equal opportunity to participate" [Schepers, 2018, p. 55]). Three studies ($n = 3$) indicated their samples included both general and special education teachers. Four studies ($n = 4$) utilized a mixed-methods approach, nine studies ($n = 9$) utilized quantitative data analysis, and four studies ($n = 4$) utilized qualitative data analysis.

Resulting Themes

Qualitative analysis of study themes led to the emergence of four themes: (1) conceptualization of CF and STS; (2) teachers are at risk of developing CF and STS; (3) varying approaches can mitigate the risk of CF and STS in teachers; and (4) there is limited research on CF and STS in teachers.

Theme 1: Conceptualizing CF and STS

Six studies ($n = 6$) explicitly examined CF, eight studies ($n = 8$) specifically examined STS, and three studies ($n = 3$) examined both constructs. However, the definition of CF and STS was not consistent across studies. Nine ($n = 9$) studies used CF and STS interchangeably, whereas eight studies ($n = 8$) made an explicit distinction between STS and CF. When conflating the definitions of CF and STS, several studies incorporated terms such as *vicarious trauma* and *burnout* in the definitions of CF and STS and did not distinguish between the constructs.

The measure of CF and STS was also inconsistent. Ten studies ($n = 10$) utilized the Professional Quality of Life Scale (ProQOL; Stamm, 2010) as a measure of CF, and while most studies utilized normative cutoff scores to identify rates of CF, four studies ($n = 4$) utilized raw or percentile score cutoffs to identify rates of CF. The ProQOL indicates use of normative cut scores as a way to identify CF in individuals completing the tool (Stamm, 2010). Simon (2019), for instance, justified the use of modifying the ProQOL because "the ProQOL STS subscale does not explicitly and comprehensively measure the specific symptom clusters consistent with the clinical presentation of STS" (p. 58). One study ($n = 1$) utilized the Secondary Traumatic Stress Scale (STSS; Bride et al., 2004) and two studies ($n = 2$) utilized an adapted version of the STSS, with one of those combining elements of both the ProQOL and STSS. Still others used different measures to examine STS and CF, including researcher-developed measures ($n = 1$) and qualitative interview questions ($n = 3$, e.g., "What is your understanding and experience, if any, with compassion fatigue?" [Peterson, 2019, p. 61]). The lack of a consistent definition of the constructs may have contributed to inconsistencies in measurement of the constructs.

Theme 2: Teachers are at Risk of Developing CF and STS

Many studies consistently identified teachers were at risk of developing CF and/or STS. How studies defined *at risk* varied, several studies indicated populations of teachers were at different levels for being at risk, and multiple studies also identified various risk factors for teachers.

Several studies concluded factors associated with working with students eligible for special education services led to increases in CF and/or STS. For instance, in a sample of 238 special education teachers, Bozgeyikli (2018) found a relationship between psychological needs and levels of CF. Hoffman et al. (2007) found similar results such that CF was determined to be present in a sample of 5 special education teachers not just in relation to the trauma histories of their students, but also from the inherent and intensive needs present in the students receiving special education services. In a study of 12 self-contained special education teachers for students with Emotional Disabilities (ED), Chun (2019) established teachers tend not to depersonalize experiences (i.e., they worry about students outside of school) and emotional exhaustion (i.e., CF) contributed to job dissatisfaction. Interestingly, Steen (2019) did not find a significant difference of levels of STS between regular and special education teachers in her sample of 260 participants. This difference may be due to a sample of teachers working specifically with students with higher needs in a self-contained classroom (Chun) versus a study sample that encompassed special education, inclusive of all service delivery settings (e.g., inclusion, resource room, and self-contained; Steen).

A few studies (*n* = 3) explicitly examined the relationship between socioeconomic status (SES) and CF and/or STS. Schepers (2018) explored the relationship between teachers' SES during childhood and current rates of STS in a sample of 115 teachers from the High Plains region of the USA. Teachers who reported growing up in working and middle-class families experienced higher levels of STS than teachers who reported growing up in upper-middle-class families. Denham (2018) utilized the STSS to examine levels of STS in 172 teachers from schools in disrepair (i.e., "blighted") and teachers from schools not in disrepair. She found significant differences between the two groups such that teachers in the non-blighted group indicated almost no STS. However, in the blighted group, teachers reported modest levels of STS, scoring significantly higher on the STSS. It should be noted that although SES was not a specific factor examined by Christian-Brandt et al. (2020), the study took place in schools with low SES populations and the researchers found evidence of STS in the teacher sample (*n* = 224). In contrast, Gomez (2020) examined levels of STS in 65 teachers of Title 1 and non-Title 1 schools and did not find a significant difference in rates of STS between teachers in the two types of schools.

Abraham-Cook (2012) examined both STS and CF in her sample of 111 teachers and found personal trauma as well as higher rates of trauma in students increased the risk of STS in her teacher sample. She also noted STS and occupational stress from time management and workload was related to increased risk of CF. Similar results were identified in a qualitative study of 15 early childhood teachers conducted by Levkovich and Gada (2020). Teachers reported feeling burdened by the multiple roles they take on as early childhood teachers and indicated they did not receive support to deal with the traumatic experiences their students faced. Like Chun (2019), participants reported having difficulty separating work from home in that they would continue to think about their students after work. Although the sample reported high levels of STS, the occupational stressors examined by Steen (2019), including time management, discipline and motivation, professional investment, and professional distress, were not significant predictors of CF in her sample of regular and special education teachers, demonstrating a need to explore additional variables that influence levels of STS.

Anderson et al. (2021) concluded the COVID-19 pandemic likely increased levels of STS in their sample of 57 teachers. Specifically, they found creative anxiety, defined as "the unease, worry, and dread that arises from having to think in an open-ended and creative way, focus on novelty, or come up with a unique way of doing something" (Anderson et al., 2021, p. 3), to be predictive of STS. In other words, lower levels of creative anxiety were associated with lower levels of STS.

In each of their studies utilizing the same sample of 37 early childhood teachers, Brown (2016) and Lepore (2016) indicated working with children with trauma and various stressors associated with those conditions can influence levels of STS. For instance, Brown (2016) reported teachers felt unprepared to work with students with trauma histories and that various workplace stressors, such as large amounts of paperwork, workplace hostility, and lack of support from administration, were potential risk factors. Brown did not find significant levels of STS in her sample. Although Lepore (2016) did not find teachers' levels of STS to differ between Time 1 and Time 2, they did find teachers indicated more stress and higher levels of frustration with parents at Time 2. Both researchers concluded that although teachers were not endorsing high levels of STS on the ProQOL, qualitative data indicted teachers were experiencing STS. According to Brown:

> teachers described the emotional impact that awareness of their students' adversities had on them at work and at home. Teachers described symptoms of STS such as sadness, guilt, helplessness, and anger regarding the adverse circumstances their students experi-

ence. Though anecdotal, it is worth noting that several teachers cried during the interview when responding to questions about the difficult circumstances their students endure and have endured. This appears to highlight the emotional intensity teachers are experiencing upon learning about students' adversities and reflecting upon these experiences (p. 101).

Lepore also indicated "in the qualitative data related to satisfaction, teachers also reported mixed and negative experiences that are not easily captured in the ProQOL items" (p. 217). Specifically, it was stated:

> while the results from the ProQOL suggest low levels of burnout and secondary traumatic stress, the statements from the interviews provide more elaboration and information on those topics. Therefore, in prioritizing the richer and more nuanced qualitative data, results from the ProQOL should be taken with caution and may reflect higher satisfaction and lower burnout and secondary traumatic stress than actually occur in this sample (p. 217–218).

Prevalence of "At Risk" Across Studies The rates at which teachers experienced STS and CF varied across studies, particularly in relation to the measurement strategies employed in each study as stated previously. Of the 10 studies ($n = 10$) utilizing the ProQOL, three studies ($n = 3$) found moderate-to-high rates of STS in their samples. Abraham-Cook (2012) found 91% of their sample rated themselves above the 75th percentile, with a mean rating of participants scoring at the 94th percentile. By converting raw scores to T-scores and classifying scores as either average or elevated, Simon (2019) found 15.7% of her sample scored in the elevated range. Grybush (2020) and Gomez (2020) employed a similar strategy of utilizing T-scores instead of raw scores and found mean ratings to be slightly above average (Grybush) and at the low end of the moderate range (Gomez). While Steen (2019) did not report prevalence rates in terms of the percentage of the sample that was rated in the high-risk range, she instead reported mean ratings across her group of general education and special education teachers, indicating that each group was at a high risk of STS, although her results did not find significant differences between the two groups' rates of STS. Anama-Green (2020) also presented mean ratings and found the mean to be in the average range. Bozgeyikli (2018) and Christian-Brandt et al. (2020) did not provide data indicating prevalence rates or mean ratings on the ProQOL. Brown (2016) indicated "[d]ue to errors in the ProQOL manual, raw scores could not be converted to T-Scores…Therefore, on measures of CS, Burnout, and STS participants were designated into low (22 or less), average (23–41), or high (42 or greater) categories based on the cut-off scores in the ProQOL manual" (p. 47). Brown

did not report any teachers to be in the high range and the mean rating for STS was in the low range. Similarly, Lepore (2016) indicated that "because of errors in the manual, T scores were not able to be derived from the raw scores" (p. 218) and did not find any teachers to be in the at-risk range; rather a majority of participants were in the low range with some in the average range.

Denham (2018) utilized the STSS and found participants in non-blighted schools to have mean ratings in the low range for STS, while participants from blighted schools had moderate levels of STS. Chun (2019) found 17% ($n = 2$) of her participants were at high risk of CF on the Compassion Fatigue and Satisfaction Self-Test (adapted from Figley, and, as cited in Chun, 2019). Schepers (2018) utilized a researcher-developed measure of STS and found most teachers experienced moderate levels of STS. Anderson et al. (2021), Hoffman et al. (2007), Levkovich and Gada (2020), and Peterson (2019) discussed the presence of CF and STS in their samples but did not indicate specific measures or prevalence.

Theme 3: Varying Approaches Can Mitigate the Risk of CF and STS in Teachers

Six studies ($n = 6$) examined CF and STS in teachers through specific interventions that were implemented to mitigate the risk of CF and/or STS. Each of the 17 studies discussed protective factors in place for individuals to mitigate the risk of CF and/or STS.

Mitigating Risk Factors Through Intervention Christian-Brandt et al. (2020) examined the impact of training in trauma-informed care (TIC) on teacher-reported levels of STS. In their sample of teachers in low-income elementary schools from one school district implementing TIC practices, they found higher rates of STS predicted higher teacher perception of TIC effectiveness. Surprisingly, STS was not found to be a significant predictor of intent to leave the field of education. In her qualitative study of six educators in a district which had previously undergone training in trauma-informed practices, Peterson's (2019) findings were mixed in that although some individuals were considered to be trauma-informed, they were indeed more susceptible to CF. However, she suggested being trauma-informed perhaps also lessened the impact of CF for some individuals and that teachers were able to create boundaries with their students, engage in a work–life balance, and engage in self-care to mitigate CF. Finally, it appears that being trauma-informed may also impact, and indeed lessen, the desire to leave the teaching profession.

Anderson et al. (2021) implemented a professional development training about the impact and integration of creativity in teaching and learning. "Teachers learned and applied a variety of teaching techniques to integrate creative and

artistic processes into their instruction and curriculum, starting with brief creative routines" (Anderson et al., p. 4). In their sample of 57 teachers, the researchers examined creative anxiety, defined as the worry and unease that results from having to think or develop unique and creative ways to do something, and STS. Creative anxiety was a significant predictor of stress, and lower levels of creative anxiety were associated with lower levels of STS as indicated by "a large effect size positive correlation with STS in teaching ($r = 0.58$, $p < 0.05$)" (Anderson et al., p. 9).

Grybush (2020) examined the relationship between personal trauma histories, professional development training, and STS with attitudes toward TIC in a sample of 147 elementary educators in rural, Title I schools. In this study, professional development was offered by the North Carolina Resilience and Learning Project, a program that "works with identified schools providing professional development and ongoing coaching that aims to teach and support socioemotional or coping skills among students, as well as build a positive school climate with supportive relationships" (Public School Forum of North Carolina, n.d. as cited in Grybush, 2020, p. 18). The researcher found that when controlling for personal trauma (as measured by self-reported Adverse Childhood Experiences [ACEs]), professional development was inversely related to attitudes toward TIC as measured by participants' total score on the Attitudes Related to Trauma-Informed Care (ARTIC) instrument (Baker et al., 2016 as cited in Grybush, 2020), and accounted for 16.9% of the variance in teachers' attitudes toward TIC. Of note, in Grybush's regression model, rates of STS were utilized as predictor variable rather than as an outcome variable. There was not a significant correlation between professional development training and STS, although there was a significant, negative relationship between professional development and the outcome variable, scores on the ARTIC.

Finally, two studies utilized reflective supervision to examine its impact on CF and STS. Reflective supervision is defined as "the process of examining, with someone else, the thoughts, feelings, actions, and reactions evoked in the course of working closely with young children and their families", (Eggbeer et al., 2007, p. 5, as cited in Lepore, 2016, p. 12). Brown (2016) and Lepore (2016) each utilized reflective supervision within the same sample of early childhood educators. Qualitative data indicated teachers reported higher levels of compassion satisfaction after engaging with reflective supervision, and reported an increased sense of self-efficacy (Brown). Lepore concluded that more time spent engaging in reflective supervision helped protect teachers against stressors related to engaging with families. Neither study reported effect sizes for the impact of reflective supervision on STS and CF.

Protective Factors Compassion satisfaction was found to serve as a protective factor in nine studies ($n = 9$;

Abraham-Cook, 2012; Brown, 2016; Bozgeyikli, 2018; Christian-Brandt et al., 2020; Chun, 2019; Hoffman et al., 2007; Lepore, 2016; Levkovich & Gada, 2020; Steen, 2019). For instance, Abraham-Cook (2012) found teachers who endorsed having strong social support networks reported few symptoms related to STS. She also found a relationship between work–life balance and STS. Similarly, Chun (2019) found self-fulfillment and job satisfaction to mediate the risks of CF, and Bozgeyikli (2018) reported that as special education teachers' psychological needs are met, levels of compassion satisfaction increase while levels of burnout and CF decrease. Brown (2016) found that learning to separate work from home life, engaging in the process of reflective supervision as a way to relieve stress and express emotional reactions to students' experiences, and gaining support from peers and colleagues appeared to be effective protective elements of reflective supervision, resulting in increased feelings of self-efficacy and compassion satisfaction. Results from Hoffman et al. (2007) supported these claims as well.

Anama-Green (2020) examined self-reported levels of interpersonal mindfulness in a sample of 122K-12 teachers in Eastern Kentucky. Results indicated that those reporting high levels of intrapersonal mindfulness had a significantly lower risk of burnout and STS. Simon (2019) found that while teacher ACEs were positively associated with STS, teachers' use of cognitive reappraisal was negatively associated with STS.

Theme 4: There is Limited Research on CF and STS in Teachers

Nearly every study examined cited the limitations of the existing body of literature as a motivation for conducting their studies. Many indicated teachers are susceptible to STS (Christian-Brandt et al., 2020) and CF (Steen, 2019), particularly teachers working in urban environments (Abraham-Cook, 2019) and/or with high-needs populations due to higher rates of trauma prevalence among students (Chun, 2019; Denham, 2018). Schepers (2018) also found elementary teachers experienced more STS than secondary teachers and an inverse relationship between childhood SES and STS, such that individuals reporting higher levels of SES during childhood endorsed lower rates of STS. Similar to Simon (2019), Schepers also found non-White teachers experienced less STS compared to White teachers, although Schepers postulated this was related to how trauma is experienced by these different groups. Interestingly, however, Gomez (2020) did not find a significant difference in rates of STS among teachers teaching in Title I schools versus those teaching in non-Title I schools, nor did she find a significant difference between novice and experienced teachers and rates of STS.

Grybush (2020) noted that as teachers' roles have expanded given the increasing needs of students, teachers

lack the training necessary to support student socioemotional, cognitive, and behavioral needs. Several studies cited the lack of teacher training in relation to TIC (Lepore, 2016; Levkovich & Gada, 2020; Peterson, 2019). Hoffman et al. (2007) in particular examined special education teachers due to high rates of attrition in the field as well as the intensive needs students receiving special education services demonstrate.

Discussion and Conclusion

STS and CF are constructs that were first introduced and have been widely studied, in the mental health and healthcare professions (Sinclair et al., 2017). However, these phenomena can also arise in educators. Due to the increase in students who have experienced trauma, teachers are at greater risk of developing STS from being exposed to trauma in their job. This may lead to the development of CF from hearing about and providing support to students who have experienced trauma (Caringi et al., 2015; Christian-Brandt et al., 2020; Hupe & Stevenson, 2019; Koenig et al., 2017). When teachers have reduced empathic ability from CF, it is quite possible teachers may leave the profession and students do not receive the support they need (Christian-Brandt et al., 2020). As such, we conducted a systematic review of the literature to bring light to the presence of CF and STS in teachers. From this review, we conceptualized CF and STS in teachers, recognized that teachers are at risk of developing CF and STS, identified varying approaches that can mitigate the risk of teachers developing CF and STS, and documented a need for further research.

Conceptualization of CF and STS

Similar to the previous research (Sinclair et al., 2017), in this review, STS and CF were frequently conflated with each other and with constructs such as burnout and vicarious trauma. We propose that by consistently, and distinctly, conceptualizing, defining, and utilizing these constructs, more research can be conducted to inform supports, thereby potentially preventing and ameliorating CF and STS in teachers. Brown (2016) describes both CF and STS focus on the impact of witnessing and empathizing with someone else's emotional pain and suffering. Therefore, both CF and STS describe a preoccupation with a student's trauma experience (Figley, 1995). More broadly, Bozgeyikli (2018) define CF as the psychological problems that result from recurrent exposure to traumatic incidences that lead to ignoring a teacher's own emotional needs, thereby losing the ability to care for students (Joinson, 1992). STS, on the other hand, was defined by Anderson et al. (2021) as the stress experienced from caring for trauma-exposed students

(Walker, 2019) whom teachers want to support (Bride et al., 2004) and the associated symptoms (e.g., intrusion, avoidance, arousal) that arise from providing such care. As such, CF focuses more on the inability to provide sufficient care, whereas STS emphasizes the acquired posttraumatic stress symptoms from caring for a student exposed to trauma. Based on these prior definitions and findings from this review, we define STS in teachers as: *given exposure to a student's trauma (current or historical) and a desire to help the student, the individual experiences oversensitivity to trauma-related stimuli and negatively impacted daily functioning*. More specifically, we define CF in teachers as *a reduced empathic capacity from being exposed to students' experiences (including student trauma histories) and a reduced sense of self-efficacy to respond to the trauma (due to multiple exposures or because of inadequate personal and/or systemic resources), that can reduce a teacher's job satisfaction and performance*. Although we define these terms distinctly, we acknowledge STS and CF are not mutually exclusive, as symptoms from STS may facilitate CF, a reduction in the ability to provide sufficient care for students (Cieslak et al., 2014). Conceptualizing CF and STS in teachers helps define the impacts of student trauma on teachers, making way for school psychologists, administrators, and policy makers to intervene and support teachers.

Teachers are at Risk of Developing CF and STS

As evidenced by the articles included in this review, circumstances exist in which teachers may be at risk of developing CF and STS. For instance, various interpersonal factors present in students have an impact on the presence of CF and STS in teachers. Specifically, this systematic literature review found teachers working with students eligible for special education services led to increases in CF and/or STS (e.g., Hoffman et al., 2007). Although our review found mixed results when exploring the relation between SES and teacher CF and STS, it appears that CF is more prevalent in underserved schools (Christian-Brandt et al., 2020) and in schools with higher rates of economically marginalized and racially and ethnically diverse populations (Abraham-Cook, 2012; Denham, 2018). It is also not surprising our study found that the more students with trauma histories a teacher serves, the more likely it is that teachers will develop CF or STS, consistent with Abraham-Cook's (2012) findings. Teachers receive training in academic subject areas, but do not receive specific training related to supporting student mental health (Ohrt et al., 2020). Although teachers feel it is important to support student socioemotional learning and mental health, they do not feel they have enough training to do so (Reinke et al., 2011). Articles from this review found teachers who were trauma-informed had decreased levels of CF and STS (Christian-Brandt et al., 2020; Peterson, 2019).

Therefore, it may be beneficial to offer training to both pre-service and in-service teachers related to trauma-informed practices, mental health literacy, and preventing STS and CF through self-care, especially in the time of the COVID-19 pandemic.

Varying Approaches Can Mitigate the Risk of CF and STS in Teachers

Several studies in this review examined the means by which the risk of CF and/or STS can be mitigated for teachers, the first focusing on teacher well-being. Compassion satisfaction is inherently the inverse of CF and may protect teachers against CF (Christian-Brandt et al., 2020). Establishing social support networks (e.g., supportive supervisors, positive feedback) moderates stress and reduces symptoms of burnout and may help teachers develop compassion satisfaction (Abraham-Cook, 2012). For example, teachers who engaged in reflective supervision, a source of social support, reported higher levels of compassion satisfaction, according to studies included in this review (Brown, 2016; Lepore, 2016). Given that this is understudied in educators (Christian-Brandt et al., 2020), it is an area ripe for further exploration.

Additionally, training in TIC and creativity (Anderson et al., 2021; Christian-Brandt et al., 2020; Peterson, 2019) can also mitigate CF and STS. We suggest an emphasis on creating a trauma-informed school system in which teachers are provided with education and training related to trauma-informed practices. We further support schools where there is a clear system for referring students for additional socioemotional support and in which interagency collaboration provides opportunities for students to receive mental health interventions. Taken together, these may have contributed to the positive effects found amongst teachers in included studies that provided training in TIC. Peterson (2019) found having training in and providing TIC to students was found to lessen the desire to leave the teaching profession, which is noteworthy due to present teacher attrition rates (Sutcher et al., 2015). In short, this systematic review found both making structural changes to bolster compassion satisfaction and providing training related to student mental health needs can mitigate teacher risk for CF and STS.

Limitations and Directions for Future Research

In this review, we conducted two searches to discover articles related to CF and/or STS. From the combination of searches, only 17 total studies ($n = 17$) were included in this review—less than half of which were peer-reviewed—demonstrating the scarcity of research exploring CF and STS in teachers. As such, this review is limited in a few capacities, and we offer directions for future research.

First, and perhaps most problematic, relates to the inconsistencies in the measurement of STS and CF across studies, thus limiting comparability of results. Of the studies that used the same measure (e.g., ProQOL), the measure itself was utilized and interpreted in different ways. Four studies that measured CF using the ProQOL utilized raw or percentile scores, counter to using normative cutoff scores as indicated on the measure itself (Stamm, 2010). Two studies, Brown (2016) and Lepore (2016), indicated "errors" were found in the ProQOL manual, limiting their ability to accurately report rates of STS and CF. Measurement of the constructs in a consistent manner will lead to a more accurate picture as it relates to prevalence of CF and STS. To do so, we suggest future research use consistent terminology when exploring CF and STS in teachers to ensure a consistency in understanding these phenomena, definitions of which we propose in this review. Additionally, our study yielded inconsistent results into the understanding of factors—whether internal to the educators (e.g., growing up in poverty; Schepers, 2018) or external factors (e.g., working with students in self-contained special education classrooms)—that may contribute to STS and CF in teachers. Further research needs to more clearly delineate risk and protective factors for educators to support prevention of STS and CF in teachers. In this vein, additional research examining the intersectionality of one's own traumatic experiences related to historical (Kirmayer, et al., 2014), transgenerational, and systemic oppression trauma (Goodman, 2016) and the CF and STS one may experience as a result of educating students with trauma histories—and whether their students are also experiencing historical, transgenerational, and/or systemic oppression trauma—must be examined to contribute to the development of a "race-centered trauma informed framework" (Joseph et al., 2020, p. 165).

Second, we limited our study to only focus on teachers, rather than educators as a whole. Given the demands placed on teachers, and their daily interaction with students, we wanted to examine CF and STS specifically within this population. Thus, we excluded 18 articles that had educators more broadly as the sample (e.g., included administrators and/or school-based mental health professionals in the sample). Because of the unique roles various professionals hold within a building, experiences of CF and STS may differ based on those roles. Expanding the research base to concretely examine these constructs separately by role (e.g., administrators; teachers; school-based mental health professionals) may offer insight into the risk and protective factors that may contribute to or mitigate CF and STS in educators. Finally, because studies were limited to those published in English, international studies examining these constructs may have been excluded. Thus, the generalizability of these studies may be limited.

Implications

In conclusion, this review contributes to the field of school-based mental health and teacher education because we found evidence STS and CF are prevalent in some teachers. First, we discovered these constructs are ill-defined and used interchangeably, making the current study of CF and STS in teachers diluted and unclear. Therefore, we provide definitions of CF and STS in teachers. Second, we found some teachers are at risk of developing CF and STS, particularly under certain conditions. For example, it is important to especially monitor special education teachers, teachers working with students from low socioeconomic backgrounds, and teachers who have experienced trauma themselves. Third, to mitigate the effects of student trauma on teachers, we can provide training in pre-service teacher programs, provide professional development, lessen teacher's workload, create trauma-informed schools, and hire more mental health providers who can serve students and provide guidance and consultation for teachers. It is important the findings from this review be disseminated to teachers so they can further understand the reasoning behind their feelings as symptoms of CF or STS from working with students with trauma backgrounds. Next steps include making policy changes where school mental health is viewed as equally important as academics, given the prevalence of student mental health needs (NCTSN, 2018), the bidirectional nature of student and teacher mental health (Eddy et al., 2020), the presence of CF and STS in some teachers (illuminated in this review), and information suggesting schools are the ideal setting for children to receive mental health services (Duong et al., 2021). These constructs are to be further explored to explain why CF and STS exist in some teachers and not others. Exploring associated risk and protective factors can help mitigate the risk of teachers developing CF and STS.

Declarations

References

*Study included in analysis

*Abraham-Cook, S. (2012). *The prevalence and correlates of compassion fatigue, compassion satisfaction, and burnout among teachers working in high-poverty urban public schools* (Publication No. 1814). [Seton Hall University Dissertations and Theses]. ProQuest LLC.

*Anama-Green, C. (2020). Intrapersonal mindfulness is associated with reduced risk of burnout among Central Appalachian educators. *Explore*. https://doi.org/10.1016/j.explore.2020.10.003

*Anderson, R. C., Bousselot, T., Katz-Buoincontro, J., & Todd, J. (2021). Generating buoyancy in a sea of uncertainty: Teachers creativity and well-being during the COVID-19 pandemic. *Frontiers in Psychology, 11*, 3931. https://doi.org/10.3389/fpsyg.2020.614774

Assari, S. (2020). Family socioeconomic status and exposure to childhood trauma: Racial differences. *Children, 7*(6), 57. https://doi.org/10.3390/children7060057

Baird, K., & Kracen, A. C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis. *Counselling Psychology Quarterly, 19*(2), 181–188.

Baumeister, R. F. (2013). Writing a literature review. In M. J. Prinstein (Ed.), *The Portable Mentor: Expert Guide to a Successful Career in Psychology* (pp. 119–132). Springer. https://doi.org/10.1007/978-1-4614-3994-3_8

Beck, C. T. (2011). Secondary traumatic stress in nurses: A systematic review. *Archives of Psychiatric Nursing, 25*(1), 1–10. https://doi.org/10.1016/j.apnu.2010.05.005

Bell, H., Limberg, D., & Robinson, E. (2013). Recognizing trauma in the classroom: A practical guide for educators. *Childhood Education, 89*, 139–145. https://doi.org/10.1080/00094056.2013.792629

Bercier, M. L., & Maynard, B. R. (2015). Interventions for secondary traumatic stress with mental health workers: A systematic review. *Research on Social Work Practice, 25*(1), 81–89. https://doi.org/10.1177/1049731513517142

Borntrager, C., Caringi, J. C., van den Pol, R., Crosby, L., O'Connell, K., Trautman, A., & McDonald, M. (2012). Secondary traumatic stress in school personnel. *Advances in School Mental Health Promotion, 5*(1), 38–50. https://doi.org/10.1080/1754730X.2012.664862

*Bozgeyikli, H. (2018). Psychological needs as the working-life quality predictor of special education teachers. *Universal Journal of Educational Research, 6*(2), 289–295.

Branson, D. C. (2019). Vicarious trauma, themes in research, and terminology: A review of literature. *Traumatology, 25*(1), 2–10. https://doi.org/10.1037/trm0000161

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*. https://doi.org/10.1080/14780887.2020.1769238

Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and validation of the Secondary Traumatic Stress Scale. *Research on Social Work Practice, 14*, 27–35. https://doi.org/10.1177/1049731503254106

*Brown, L. (2016). *The impact of reflective supervision on early childhood educators of at-risk children: Fostering compassion satisfaction and reducing burnout* (Publication No. 10193236). [Doctoral dissertation, University of California, Santa Barbara]. ProQuest LLC.

Caringi, J. C., Stanick, C., Trautman, A., Crosby, L., Devlin, M., & Adams, S. (2015). Secondary traumatic stress in public school teachers: Contributing and mitigating factors. *Advances in School Mental Health Promotion, 8*(4), 244–256. https://doi.org/10.1080/1754730X.2015.1080123

Centers for Disease Control and Prevention. (2019). *Vital signs: Adverse childhood experiences (ACEs): Preventing early trauma to improve adult health.* Retrieved from https://www.cdc.gov/vitalsigns/aces/pdf/vs-1105-aces-H.pdf

*Christian-Brandt, A. S., Santacrosse, D. E., & Barnett, M. L. (2020). In the trauma-informed care trenches: Teacher compassion satisfaction, secondary traumatic stress, burnout, and intent to leave

education within underserved elementary schools. *Child Abuse & Neglect, 110*(3), 104437.

*Chun, C. N. M. (2019). *A qualitative phenomenological study exploring teachers perceptions on how to meet the needs of students with emotional disabilities* (Publication No. 27544725). [Doctoral dissertation, Northcentral University]. ProQuest LLC.

Cieslak, R., Shoji, K., Douglas, A., Melville, E., Luszczynska, A., & Benight, C. C. (2014). A meta-analysis of the relationship between job burnout and secondary traumatic stress among workers with indirect exposure to trauma. *Psychological Services, 11*(1), 75–86.

Conrad, D., & Kellar-Guenther, Y. (2006). Compassion fatigue, burnout, and compassion satisfaction among Colorado child protection workers. *Child Abuse & Neglect, 30*, 1071–1080.

*Denham, F. S. (2018). *School building blight and teacher secondary traumatic stress: A quantitative study* (Publication No. 10974259). [Doctoral dissertation, Northcentral University]. ProQuest LLC.

Duong, M. T., Bruns, E. J., Lee, K., Cox, S., Coifman, J., Mayworm, A., & Lyon, A. R. (2021). Rates of mental health service utilization by children and adolescents in schools and other common service settings: A systematic review and meta-analysis. *Administration and Policy in Mental Health, 48*(3), 420–439. https://doi.org/10.1007/s10488-020-01080-9

Eddy, C. L., Huang, F. L., Cohen, D. R., Baker, K. M., Edwards, K. D., Herman, K. C., & Reinke, W. M. (2020). Does teacher emotional exhaustion and efficacy predict student discipline sanctions? *School Psychology Review, 49*(3), 239–255.

Education Support Partnership. (2020). *Teacher Wellbeing Index 2020*. London: Author. Retrieved from https://www.educationsupport.org.uk/sites/default/files/teacher_wellbeing_index_2020.pdf

Essary, J. N., Barza, L., & Thurston, R. J. (2020). Secondary traumatic stress among educators. *Kappa Delta Pi Record, 56*(3), 116–121.

Figley, C. R. (Ed.). (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* Brunner/Mazel.

Figley, C. R., & Kleber, R. J. (1995). Beyond the "victim": Secondary traumatic stress. In R. J. Kleber, C. R. Figley, & B. P. R. Gersons (Eds.), *Beyond trauma: Cultural and societal dynamics* (pp. 75–98). Plenum Press.

Figley, C. R., & Stamm, B. H. (1996). Psychometric review of Compassion Fatigue Self Test. In B. H. Stamm (Ed.), *Measurement of stress, trauma, and adaptation* (pp. 129–130). Sidran.

Geoffrion, S., Lamothe, J., Morizot, J., & Giguère, C.-E. (2019). Construct validity of the Professional Quality of Life (ProQol) scale in a sample of child protection workers. *Journal of Traumatic Stress, 32*, 566–576.

Goodman, R. D. (2016). A liberatory approach to trauma counseling: Decolonizing our trauma-informed practices. In R. D. Goodman & P. C. Gorski (Eds.), *Decolonizing "multicultural" counseling through social justice* (pp. 55–72). Springer.

*Gomez, K. (2020). *Elementary teachers' self perceptions of professional quality of life* (Publication No. 28030866). [Doctoral dissertation, Graduate College at the University of Nebraska]. ProQuest LLC.

*Grybush, A. L. (2020). *Exploring attitudes related to trauma-informed care among teachers in rural title 1 elementary schools: Implications for counselors and counselor educators* (Publication No. 28002535). [Doctoral dissertation, University of North Carolina at Charlotte]. ProQuest LLC.

*Hoffman, S., Palladino, J. M., & Barnett, J. (2007). Compassion fatigue as a theoretical framework to help understand burnout among special education teachers. *Journal of Ethnographic & Qualitative Research, 2*, 15–22.

Hupe, T. M., & Stevenson, M. C. (2019). Teachers' intentions to report suspected child abuse: The influence of compassion fatigue. *Journal of Child Custody: Research, Issues, and Practices, 16*(4), 364–386. https://doi.org/10.1080/15379418.2019.1663334

Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology, 20*(2), 178–187. https://doi.org/10.1108/02683940510579803

Joinson, C. (1992). Coping with compassion fatigue. *Nursing, 22*, 116–121.

Joseph, A. A., Wilcox, S. M., Hnilica, R. J., & Hansen, M. C. (2020). Keeping race at the center of school discipline practices and trauma-informed care: An interprofessional framework. *Children & Schools, 42*(3), 161–170.

Kaden, U. (2020). COVID-19 school closure-related changes to the professional life of a K–12 teacher. *Education Sciences, 10*, 165. https://doi.org/10.3390/educsci10060165

Kirmayer, L. J., Gone, J. P., & Moses, J. (2014). Rethinking historical trauma. *Transcultural Psychiatry, 51*(3), 299–319. https://doi.org/10.1177/1363461514536358

Koenig, A., Rodger, S., & Specht, J. (2017). Educator burnout and compassion fatigue: A pilot study. *Canadian Journal of School Psychology, 32*(1), 1–20.

Lawson, H. A., Caringi, J. C., Gottfried, R., Bride, B. E., & Hydon, S. P. (2019). Educators' secondary traumatic stress, children's trauma, and the need for trauma literacy. *Harvard Educational Review, 89*(3), 421–447.

*Levkovich, I., & Gada, A. (2020). "The weight falls on my shoulders": Perceptions of compassion fatigue among Israeli preschool teachers. *Asia-Pacific Journal of Research in Early Childhood Education, 14*, 91–112. https://doi.org/10.17206/apjrece.2020.14

*Lepore, C. E. (2016). *The prevention of preschool teacher stress: Using mixed methods to examine the impact of reflective supervision* (Publication No. 10193227). [Doctoral dissertation, University of California, Santa Barbara]. ProQuest LLC.

Maslach, C. (2003). Job burnout: New directions in research and intervention. *Current Directions in Psychological Science, 12*, 189–192.

Merrick, M. T., Ford, D. C., Ports, K. A., & Guinn, A. S. (2018). Prevalence of adverse childhood experiences from the 2011–2014 behavioral risk factor surveillance system in 23 states. *JAMA Pediatrics, 172*(11), 1038–1044.

Mueser, K. T., & Taub, J. (2008). Trauma and PTSD among adolescents with severe emotional disorders involved in multiple service systems. *Psychiatric Services (washington, D.c.), 59*(6), 627–634. https://doi.org/10.1176/ps.2008.59.6.627

Myers, H. F., Wyatt, G. E., Ullman, J. B., Loeb, T. B., Chin, D., Prause, N., Zhang, M., Williams, J. K., Slavich, G. M., & Liu, H. (2015). Cumulative burden of lifetime adversities: Trauma and mental health in low-SES African Americans and Latino/as. *Psychological Trauma: Theory, Research, Practice, and Policy, 7*(3), 243–251. https://doi.org/10.1037/a0039077

National Child Traumatic Stress Network. (2018). *Trauma-informed schools for children in K- 12: A system framework.* Retrieved from https://www.nctsn.org/resources/trauma-informed-schools-children-k-12-system-framework.

National Child Traumatic Stress Network. (2008). *Trauma facts for educators.* Retrieved from https://www.nctsn.org/sites/default/files/resources//trauma_facts_for_educators.pdf.

Ohrt, J. H., Deaton, J. D., Linich, K., Guest, J. D., Wymer, B., & Sandonato, B. (2020). Teacher training in K12 student mental health: A systematic review. *Psychology in the Schools, 57*(5), 833–846. https://doi.org/10.1002/pits.22356

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 327*(71), 1–8. https://doi.org/10.1186/s13643-021-01626-4

Pas, E. T., Bradshaw, C. P., & Hershfeldt, P. A. (2012). Teacher- and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of School Psychology, 50*(1), 129–145. https://doi.org/10.1016/j.jsp.2011.07.003

*Peterson, S. (2019). *Trauma-informed teachers and their perceived experiences with compassion fatigue* (Publication No. 13900262). [Doctoral dissertation, Capella University]. ProQuest LLC.

Porche, M. V., Costello, D. M., & Rosen-Reynoso, M. (2016). Adverse family experiences, child mental health, and educational outcomes for a national sample of students. *School Mental Health, 8*, 44–60.

Reinke, W., Stormont, M., Herman, K., Puri, R., & Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly, 26*, 1–13. https://doi.org/10.1037/a0022714

Ruiz-Fernández, M. D., Ramos-Pichardo, J. D., Ibáñez-Masero, O., Cabrera-Troya, J., Carmona-Rega, M. I., & Ortega-Galán, Á. M. (2020). Compassion fatigue, burnout, compassion satisfaction and perceived stress in healthcare professionals during the COVID-19 health crisis in Spain. *Journal of Clinical Nursing, 29*(21–22), 4321–4330.

Samios, C. (2018). Burnout and psychological adjustment in mental health workers in rural Australia: The roles of mindfulness and compassion satisfaction. *Mindfulness, 9*(4), 1088–1099.

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An overview of 25 years of research and theorizing. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *The handbook of work and health psychology* (2nd ed., pp. 383–425). Wiley.

*Schepers, O. (2018). *A teacher at risk: Giving voice to teacher secondary traumatic stress* (Publication No. 10607823). [Doctoral dissertation, Graduate School of the University of Colorado at Boulder]. ProQuest LLC.

Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to do a systematic review: A best practice guide for conducting and reporting narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology, 70*, 747–770. https://doi.org/10.1146/annurev-psych-010418-102803

*Simon, K. A. (2019). *The implications of secondary traumatic stress for student socio-emotional functioning* (Publication No. 13882306). [Doctoral dissertation, The School of Science and Engineering of Tulane University]. ProQuest LLC.

Sinclair, S., Raffin-Bouchal, S., Venturato, L., Mijovic-Kondejewski, J., & Smith-MacDonald, L. (2017). Compassion fatigue: A meta-narrative review of the healthcare literature. *International Journal of Nursing Studies, 69*, 9–24.

Skovholt, T. M., & Trotter-Mathison, M. (2016). *The resilient practitioner: Burnout and compassion fatigue prevention and self-care strategies for the helping professions* (3rd ed.). Routledge. https://doi.org/10.4324/9781315737447

Sondel, B., Baggett, H. C., & Dunn, A. H. (2018). "For millions of people, this is real trauma": A pedagogy of political trauma in the wake of the 2016 U. S. presidential election. *Teaching and Teacher Education, 70*, 175–185.

Stamm, B. H. (1997). Professional quality of life: Compassion satisfaction and fatigue subscales. *R-IV (ProQOL)*.

Stamm, B.H. (2010). *The Concise ProQOL Manual, 2nd Ed.* ProQOL.org.

*Steen, A. M. (2019). *Threats to teaching: An investigation into the constructs of compassion fatigue in the classroom* (Publication No. 13902205). [Doctoral dissertation, College of Education University of South Florida]. ProQuest LLC.

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2015). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* [Research brief]. Washington, DC: Learning Policy Institute.

Tuchinda, N. (2020). The imperative for trauma-responsive special education. *New York University Law Review, 95*(3), 766–836.

Turgoose, D., & Maddox, L. (2017). Predictors of compassion fatigue in mental health professionals: A narrative review. *Traumatology, 23*(2), 172–185. https://doi.org/10.1037/trm0000116

Valentine, J., & Cooper, H. (2008). A systematic and transparent approach for assessing the methodological quality of intervention effectiveness research: The Study Design and Implementation Assessment Device (Study DIAD). *Psychological Methods*. https://doi.org/10.1037/1082-989X.13.2.130

Walker, T. (2019). "I didn't know it had a name": Secondary traumatic stress and educators. NEA Today. http://neatoday.org/2019/10/18/secondary-traumatic-stress/

Xie, W., Chen, L., Feng, F., Okoli, C. T., Tang, P., Zeng, L., Jin, M., Zhang, Y., & Wang, J. (2021). The prevalence of compassion satisfaction and compassion fatigue among nurses: A systematic review and meta-analysis. *International Journal of Nursing Studies, 120*(103973), 1–18.