Received: 6 March 2019 | Revised: 12 January 2020 | Accepted: 13 January 2020

DOI: 10.1002/cpp.2429

COMPREHENSIVE REVIEW

WILEY

Self-compassion, trauma, and posttraumatic stress disorder: A systematic review

Sarah-Jane Winders | Orlagh Murphy | Kathy Looney | Gary O'Reilly

Department of Clinical Psychology, University College Dublin, Dublin, Ireland

Correspondence
Dr Sarah-Jane Winders, Department of Clinical Psychology, University College Dublin, Dublin, Ireland.
Email: sarah-jane.winders@ucdconnect.ie

Funding information
Health Service Executive, Ireland, Grant/Award Number: No specific grant/award number - This research pro

Abstract

Self-compassion has emerged as an important construct in the mental health literature. Although conceptual links between self-compassion and trauma are apparent, a review has not been completed to examine whether this association is supported by empirical research findings. To systematically summarize knowledge on the association between trauma and/or posttraumatic stress disorder (PTSD) and self-compassion. Searches were conducted in PsycINFO, PubMed, Ovid Medline, Web of Science, Embase, and PILOTS databases, and papers reporting a direct analysis on the relationship between these constructs were identified. The search yielded 35 studies meeting inclusion criteria. Despite considerable heterogeneity in study design, sample, measurement, and trauma type, there was consistent evidence to suggest that increased self-compassion is associated with less PTSD symptomatology and some evidence to suggest that reduced fear of self-compassion is associated with less PTSD symptomatology. There was tentative evidence to suggest that interventions based, in part or whole, on a self-compassion model potentially reduce PTSD symptoms. Although findings are positive for the association between increased self-compassion and reduced PTSD symptoms, the precise mechanism of these protective effects is unknown. Prospective and longitudinal studies would be beneficial in clarifying this. The review also highlighted the variability in what is and should be referred to as trauma exposure, indicating the need for further research to clarify the concept.

KEYWORDS

self-compassion, fear of self-compassion, trauma, posttraumatic stress disorder, review

1 | INTRODUCTION

Self-compassion is a multidimensional construct that research indicates can enhance well-being and reduce mental health difficulties (Finlay-Jones, 2017; MacBeth & Gumley, 2012; Van Dam, Sheppard, Forsyth, & Earleywine, 2011). Consequently, research on self-compassion as a modifiable factor is growing. It is becoming a target in psychological approaches to the treatment of negative outcome of trauma (Bonanno & Mancini, 2012), for example, posttraumatic stress disorder (PTSD). Although increased self-compassion has been found to decrease avoidance of emotional discomfort and reduce shame and self-criticism (Germer & Neff, 2013), its exact role in the relationship it has with trauma exposure and trauma symptoms is unclear. The current review aims to synthesize the available evidence in the literature on the relationship between self-compassion, trauma, and PTSD.

1.1 | Trauma and PTSD

The term "trauma," originates from Ancient Greek and refers to the notion of "wound" or "damage." Trauma is widely discussed in mental health literature due to the possible negative sequelae (Bonanno, 2004; Bonanno & Mancini, 2012; Friedman, Keane, & Resick, 2007;

Herman, 1992; Yehuda et al., 2015), yet the concept currently lacks epistemological clarity (Krupnik, 2018). The term is broadly linked with a broad range of traumatic events that may occur in the childhood or adulthood and trauma outcomes such as PTSD (Haslam, 2016; Krupnik, 2018; May, Wisco, May, & Wisco, 2015). There is debate in the field about the need for boundaries to demarcate ordinary stressors and adversity from trauma. Considering trauma on a wide continuum of adversity makes it challenging to operationalize trauma for research and clinical practice and can pathologize ordinary stresses (Haslam, 2016; Weathers & Keane, 2007). One recent broad definition states that trauma is an experience, either a single episode or recurring event, series of events, or set of circumstances, that is experienced by an individual as physically or emotionally harmful or life threatening (to oneself or others) and overwhelms an individual's capacity to cope (Enlow, Blood, & Egeland, 2013; Huang et al., 2014). Trauma can result in a plethora of outcomes of which PTSD is one. According to the current edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013), PTSD occurs following exposure to actual or threatened death, serious injury, or sexual violence and it is defined by distinct symptom clusters of re-experiencing, avoidance, and numbing and arousal persisting for more than one month after trauma. Even within this criteria, different traumas (as defined by the DSM-5) can vary considerably in their resulting psychopathological outcomes and symptom configuration (Breslau et al., 1998; Kessler, Sonnega, Nelson, & Bromet, 1995; Shakespeare-Finch & Armstrong, 2010; Yehuda et al., 2015), meaning that PTSD diagnosis is not always straightforward.

Although trauma and PTSD overlap, they are distinct constructs. A majority of adults will encounter at least one traumatic event in their lifetime (Bonanno, 2004; Bonanno & Mancini, 2012; Kessler, 2000; National Center for PTSD, 2014); however, only 7% will meet criteria for lifetime prevalence of PTSD (Harvard Medical School, 2007); a further 8–15% experience persisting posttraumatic stress symptoms, which may or may not cross a diagnostic threshold for PTSD (Benjet et al., 2016; Bistricky et al., 2017; Kilpatrick et al., 2013), whereas the remainder stay asymptomatic (Kessler et al., 2005; Schnurr, Spiro, Vielhauer, Findler, & Hamblen, 2002). Research also indicated possible exacerbation of existing symptoms (Andrews, Brewin, Philpott, & Stewart, 2007), where an initial moderate or subthreshold level of symptoms gradually worsened over time (Bonanno, Rennicke, & Dekel, 2005; deRoon-Cassini, Mancini, Rusch, & Bonanno, 2010). For some, PTSD is a chronic condition, with individuals suffering symptoms several years after initial exposure to their index trauma (Gold et al., 2000; Grubaugh, Zinzow, Paul, Egede, & Frueh, 2011) and is associated with lower quality of life and functional impairment across multiple domains (Doctor, Zoellner, & Feeny, 2011; Goenjian et al., 2011; Rodriguez, Holowka, & Marx, 2012).

Research suggests there are multiple, unique trajectories of adjustment in the aftermath of potentially traumatic events (Bonanno & Mancini, 2012). Why some individuals develop PTSD following trauma exposure whereas others are resilient remains a key question in trauma research. Some factors identified as intersecting and affecting the occurrence and course of PTSD include the following: type of trauma (Breslau et al., 1998; Caramanica, Brackbill, Stellman, & Farfel, 2015; Fossion et al., 2015; Lowe, Walsh, Uddin, Galea, & Koenen, 2014; Smith, Summers, Dillon, & Cougle, 2016), timing of the trauma in an individual's lifecycle (i.e., whether it occurred in childhood or adulthood; Keyes et al., 2012; McLaughlin, Conron, Koenen, & Gilman, 2010; Obradović, van Dulmen, Yates, Carlson, & Egeland, 2006), duration of trauma (Kaysen, Rosen, Bowman, & Resick, 2009; Powers et al., 2017), predictability and controllability (Weathers & Keane, 2007), severity of trauma (Jakob, Lamp, Rauch, Smith, & Buchholz, 2017), change in resources (Bonanno, Galea, Bucciarelli, & Vlahov, 2007), pretrauma factors such as gender, personality, and education (Xue et al., 2015), personal strengths and vulnerabilities (Harvey, 1996), and social support posttrauma (Brewin, Andrews, & Valentine, 2000). Interpersonal factors such as childhood trauma, chronic adversity, and familial stressors increase the risk for PTSD (Markowitz, Milrod, Bleiberg, & Marshall, 2009). Trauma is suggested to have a dose–response effect, where prior exposure to trauma creates greater risk of PTSD from subsequent trauma (Finkelhor, Shattuck, Turner, & Hamby, 2014; Graham-Bermann, Gruber, Howell, & Girz, 2009; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993; Roberts, Gilman, Breslau, Breslau, & Koenen, 2010). Intrapersonal factors are also associated with outcomes, with less positive coping, low self-esteem, external locus of control, and self-blaming attributions related to poorer outcomes following trauma (Walsh, Blaustein, Knight, Spinazzola, & Van Der Kolk, 2007). Correspondingly, an event being traumatic may depend on subjective appraisal (Huang et al., 2014; Weathers & Keane, 2007), and posttraumatic distress is expressed differentially on the basis of subjective experience (Boals, 2018).

Individuals may experience several episodes of traumatic exposure (Kessler, 2000). In an attempt to clarify the issues with definition, additional diagnoses (e.g., complex PTSD), identified constructs or observed phenomenon (such as complex trauma and cumulative trauma), and taxonomies have emerged in the literature. Whereas PTSD focuses on a single index event, both complex posttraumatic stress disorder (CPTSD; Briere, Kaltman, & Green, 2008; Cloitre, Garvert, Brewin, Bryant, & Maercker, 2013; Herman, 1992; Hyland

Key Practitioner Message

- There is evidence to suggest that increased self-compassion may attenuate PTSD symptomatology and reduce the impact of trauma exposure.
- Reduced fear of self-compassion is associated with reduced PTSD symptomatology.
- Interventions based, in part or whole, on a self-compassion model may potentially reduce PTSD symptoms.

et al., 2017; World Health Organization, 2018) and cumulative trauma (Follette, Polusny, Bechtle, & Naugle, 1996), although themselves different, acknowledge multiple traumas. The diagnosis of CPTSD includes three additional features, including problems in affective, self-concept, and relational domains, and cumulative traumas may result in more severe PTSD symptomatology (Briere et al., 2008) and increased comorbidity (Karam et al., 2014; Shevlin, Houston, Dorahy, & Adamson, 2008; Suliman et al., 2009; Williams et al., 2007), indicating that the sequelae of cumulative traumas may be more complex (Stein, Wilmot, & Solomon, 2016). Symptoms may originate in different traumas and hence may remain experientially separate or only when combined meet the full range of diagnostic criteria (Stein et al., 2016). It is not possible to disentangle multiple exposures to trauma. Recent taxonomies also acknowledge the complexities, proposing a dimensional system based on emerging developmental function affected by the trauma and factors related to duration and timing (Kira, 2001, 2010; Kira et al., 2008, 2011). The above description is not intended to be exhaustive but highlight the complexity in the field. Although measuring PTSD symptomatology is reasonably straightforward, with reliable and valid psychometrics, such as self-report screening measures or preferably a gold standard clinical interview such as the Clinician Administered PTSD Scale (Blake et al., 1995), measuring trauma exposure has proven more difficult due to the issues related to definition and the complexity related to multiple traumas and variability in trauma characteristics. It is worth noting that PTSD is not the only potential negative outcome following trauma; however, it is one that is most easily measured.

1.2 | PTSD theories

Early theories on the development and maintenance of PTSD focused on the individual's sense of personal or global meaning (Antonovsky, 1979; Baumeister, 1991; McAdams, 1993). The Meaning Making Model attempts to integrate the salient overlapping principles of those theories into a single unified theory (Park, 2010; Park & Folkman, 1997). It posits that global meaning making is an orienting system or core schema, containing beliefs, life-goals, and subjective purpose in life, which helps individuals interpret their experiences and provide a basis of well-being. Correspondingly, people tend to hold beliefs that the world is largely benevolent and predictable, they have control over their lives, and that they are good people (Janoff-Bulman, 1989). The shattered assumptions hypothesis states that traumatic events can violate a person's global meaning. This prompts an evaluation of the event's meaning. The magnitude of the discrepancy from global meaning will determine the level of distress experienced. Meaning making is the process of restoring global meaning and reducing the discrepancy, through reappraisal and assimilation, adapting global beliefs and goals. This process is thought to result in better adjustment to the traumatic event and the possibility of stress-related growth (Bower, Kemeny, Taylor, & Fahey, 1998; Calhoun, Cann, Tedeschi, & McMillan, 2000; Park, 2016; Park, Riley, & Snyder, 2012).

There are various more models of the development and maintenance of PTSD. The "Emotional Processing Theory" (Foa & Kozak, 1986; Foa & Rothbaum, 1998; Foa, Steketee, & Rothbaum, 1989) suggests that trauma memories are often not adequately processed and triggers are avoided for fear of activating a fear network associated with intense hyperarousal. Traumatic events can disrupt the individual's basic concept of safety and create a perception that does not accurately represent the world. The Dual-Representation Theory (Brewin, Gregory, Lipton, & Burgess, 2010; Brewin & Joseph, 1996) posits that trauma events are principally encoded perceptually due to high arousal and attention largely focused on the threat source and can lack temporal contextualization and links to autobiographical memory. Subsequent trigger avoidance perpetuates this disconnect between the contextual memories and sensation-based memories of the event. Ehlers and Clarke's cognitive model of PTSD suggests that symptoms persist if the traumatic experience is processed in a way that results in a perception of serious and current threat, either external (e.g., another attack) or internal (e.g., shame; Ehlers & Clark, 2000). This perception is understood as a consequence of excessively negative and idiosyncratic appraisals of the trauma and its sequelae, in combination with disruption of autobiographical memory, meaning memories of the event are not retrieved intentionally, instead accessed involuntarily as result of triggers. These appraisals can initiate feelings of guilt and shame regarding the person's reactions to the trauma and subsequently how they perceive themselves and how they believe others to perceive them (Lee, Scragg, & Turner, 2001). Finally, Mowrer's two-factor theory suggests that fears are learned via classical conditioning but maintained by operant conditioning, as avoidance of the anxiety-provoking stimulus negatively reinforces the behaviour of avoidance (Mowrer, 1951). These theories focus largely on integrating the event within memory through reduction of avoidance and re-evaluating beliefs related to the event.

There are currently several evidence-based treatments for PTSD based on the above models, such as prolonged exposure (PE), cognitive processing therapy, and trauma-focused cognitive behavioural therapy (CBT; Watkins, Sprang, & Rothbaum, 2018); however, clinicians have requested additional perspectives regarding treatment-related factors that may facilitate recovery (Gutner, Galovski, Bovin, & Schnurr, 2016; Hoge & Chard, 2018; Steenkamp, Litz, Hoge, & Marmar, 2015). Overall, symptoms of PTSD are quite responsive to treatment, particularly PE, cognitive processing therapy, and trauma-focused CBT (Watkins et al., 2018); however, approximately one-third of individuals experience persistent symptoms and may be less responsive to traditional approaches (Jonas et al., 2013; Watkins et al., 2018). In addition, a substantial minority of individuals drop out of PTSD treatment (Imel, Laska, Jakupcak, & Simpson, 2013). The profile of those with persisting symptoms is associated with greater affect dysregulation, somatic symptoms, and dissociation (van der Kolk, 1996). In addition, comparison across groups with adult onset trauma versus those with histories of childhood trauma suggests that traditional interventions are less effective for those with childhood onset trauma (van der Kolk et al., 2007).

Self-compassion was suggested as a possible intervention or intervention adjunct.

1.3 | Self-compassion

As result of the potential negative outcomes following trauma, it is important to identify potentially modifiable factors to improve prevention and intervention (Hiraoka et al., 2015; Meyer et al., 2019; Seligowski, Miron, & Orcutt, 2015). One potential mechanism of change that has been indicated is self-compassion (Beaumont, Hollins-Martin, & Hollins-Martin, 2015; MacBeth & Gumley, 2012), for example, research indicated that it may have an integral role in the efficacy of certain mindfulness-based interventions in increasing psychological well-being (Baer, Lykins, & Peters, 2012). Self-compassion is a form of adaptive self-relating (Finlay-Jones, 2017) characterized in part by the ability or capacity to treat oneself with the same kindness and compassion as one would treat others in the same situation (Biber & Ellis, 2017; Neff, 2003). There are currently two main models of self-compassion, both emphasizing different aspects of the conceptualization.

Neff (2003) drew on the Buddhist notion of compassion and suggested that self-compassion was a tripartite construct that includes self-kindness, common humanity, and mindfulness. It involves an attitude of kindness and understanding to one's self without judgment, perceiving one's experiences as part of the larger human condition instead of feeling isolated, and being aware of painful experiences and connecting with them in a balanced way without overidentifying with them (Neff, 2003). This dimensional model of self-compassion proposes that self-compassion exists on a spectrum from high to low (Neff, 2016). The Self-Compassion Scale (SCS; Neff, 2003) and its shortened version Self-Compassion Scale—Short Form (Raes, Pommier, Neff, & Van Gucht, 2011) is the most prevalent standardized measure of self-compassion. The measure received some criticism regarding psychometric validity (Lopez et al., 2015); however, recently, SCSs single-factor and six-factor structure (three positive and three opposing negative components that are interconnected) was supported (Neff, 2016). A recent review reported that the long version was more psychometrically robust than the shortened version (Strauss et al., 2016).

Gilbert's model of compassion was developed from social mentalities theory, evolutionary theory, and attachment theory (Gilbert, 2005, 2009a) and proposes three evolved emotion systems, threat, drive, and soothing, that interact and regulate one another (Gilbert, 2014b). The threat system is designed for threat detection and activation of survival mechanisms for protection. The drive system is associated rewarding stimuli such as food, shelter, and sexual opportunities. Finally, self-compassionate behaviours are part of the soothing system, which is linked to the evolved attachment system. Early development characterized by inadequate care or stressful or threatening environments can result in an underdeveloped self-soothing system and a hyper-aroused threat system. Gilbert (2018) stated that compassion is a prosocial motivational system, designed to regulate negative affect by being attuned to suffering in self and others and commitment to alleviate it through feelings of warmth and safeness (Gilbert, 2018). Gilbert, McEwan, Matos, and Rivis (2011) proposed that some individuals, particularly those high in self-criticism, can find self-compassion challenging and can be fearful of it. The Fear of Compassion Scales—Self-Compassion subscale was designed to measure this construct (Gilbert et al., 2011).

1.4 | Self-compassion, trauma, and PTSD

Self-compassion potentially has a significant role to play in the key features of PTSD and trauma mentioned in the models above as a self-compassionate stance relates to both attitudes towards self and ways of coping (Barlow, Goldsmith Turow, & Gerhart, 2017; Germer & Neff, 2015). Self-compassion was suggested as a healthy, alternative response to trauma as it may have the potential to soothe the symptom clusters of PTSD (Germer & Neff, 2015).

First, much of the literature focuses on the Ehlers and Clarke model of PTSD that proposed that PTSD develops from and is maintained by the perception of ongoing threat (Ehlers & Clark, 2000). High self-compassion was associated with lower levels of shame, which is an internal threat commonplace following trauma (Keene & Epps, 2016) and appears to contribute to PTSD symptomatology above trauma exposure (Cromer & Smyth, 2010; DePrince, Chu, & Pineda, 2011). Changes in the DSM-5 means it now recognizes common posttraumatic changes in cognitions and mood, including shame, ensuing negative self-evaluation, self-criticism, self-blame, and guilt (Lee et al., 2001). These secondary emotions are based on cognitive appraisals following the trauma and often persist after the external threat has ceased. Adopting a self-compassionate stance is associated with less shame (Johnson & O'Brien, 2013; Woods & Proeve, 2014) and decreased self-criticism (Hiraoka et al., 2015; Hoffart, Oktedalen, & Langkaas, 2015). Training in compassion may reduce shame and self-criticism (Gilbert & Procter, 2006), and recent research suggests that shame may be a crucial treatment target as exposure therapy may be better suited to tackling external rather than internal threat (Lee et al., 2001).

Second, self-compassion is also associated with adaptive coping styles (Neff, 2003; Seligowski et al., 2015). Adaptive coping strategies generally involve confronting problems directly, making reasonably realistic appraisals of problems, recognizing and changing unhealthy emotional reactions, and trying to prevent adverse effects on the body. Higher self-compassion is associated with reduced avoidance, less suppression of unwanted thoughts, and less rumination (Leary, Tate, Adams, Allen, & Hancock, 2007; Neff, Kirkpatrick, & Rude, 2007). Avoidant coping is a common feature of PTSD and contributes to the maintenance of PTSD symptomatology (Brewin & Joseph, 1996; Ehlers & Clark, 2000; Foa et al., 1989). Neff (2003) found that self-compassion is negatively correlated with attempts to repress or avoid unwanted thoughts, particularly those related to unpleasant affect. The first study to investigate the connection between PTSD and self-compassion found that greater levels of self-compassion are

significantly associated with less avoidance symptoms (Thompson & Waltz, 2008), and findings suggest that individuals with higher self-compassion may be more willing to engage with the memories and associated negative symptomology related to their trauma without self-judgment. They may feel less threatened by their trauma-related thoughts and feelings and be more willing and resourced to soothe themselves during times of intense distress (Germer & Neff, 2015). Relatedly, ruminative thinking about the trauma and how it could have been prevented is associated with greater PTSD symptomatology (Ehlers, 2010; Steil & Ehlers, 2000); however, increases in self-compassion are associated with decreases in rumination (Krieger, Berger, & Holtforth, 2016; Svendsen, Kvernenes, Wiker, & Dundas, 2017). Self-compassion may aid the survivor to experience the memories of the event from a self-distanced perspective without it defining them (Kross & Ayduk, 2011; Neff, 2003).

Third, self-compassion is associated with improved emotional regulation (ER; Badour & Feldner, 2013; Gilbert, 2009b; Gilbert & Irons, 2005; Morris & Gray, 2015; Powers, Cross, Fani, & Bradley, 2015), resilience (Lang et al., 2017; Seligowski et al., 2015), and consequently a greater ability to manage distress (Barlow et al., 2017; Finlay-Jones, Rees, & Kane, 2015). Emotion regulation is a term generally used to describe a person's ability to effectively manage and respond to an emotional experience, and a breakdown in the capacity to regulate self is noted to be a core feature of traumatic stress (van der Kolk, 2005). Self-compassion may help balance the overactive threat system that is often a result of trauma (Gilbert, 2014b). Findings also indicate that by engaging in a compassionate perspective, one may be more likely to recognize the need for self-care and consequently acknowledge the need to engage in such ER and self-compassionate behaviours (e.g., Allen & Leary, 2010; Neff, 2003b).

Fourth, increases in self-compassion are associated with feeling interpersonally connected to others (Aspy & Proeve, 2017; Hutcherson, Seppala, & Gross, 2008; Neff et al., 2007), which is important as social support is consistently identified as a robust trauma-resilience factor (Bistricky et al., 2017; Brewin et al., 2000; Maheux & Price, 2016). Relatedly, self-compassion is conceptualized as the experience of supporting oneself during difficult times, which closely parallels or echoes the benefits of social support, suggesting that it could provide some of the benefits. This research suggests a possible connection between self-compassion and social support.

Last, traumatized individuals need to reconstruct a sense of safety and control over their lives, and self-compassion helps people evaluate themselves, others, the world, and their life experiences more accurately and in a contextualized way (Bensimon, 2017; Leary et al., 2007; Pauley & McPherson, 2010). Findings suggest it likely has a role in assimilating trauma experiences into previously held worldviews and in doing so ease the negative impact of trauma and PTSD symptoms (Janoff-Bulman, 1989; Janoff-Bulman & McPherson Frantz, 1997). In addition, it may reduce feelings of isolation associated with the experience of distress and increase recognition that difficulties are a normal part of life (Bensimon, 2017; Yang, Zhang, & Kou, 2016).

1.5 | Aims and scope of the current review

Research from both PTSD and self-compassion provides evidence to suggest that self-compassion may potentially affect the sequelae of trauma and PTSD; however, no review has systematically assessed this relationship. The aim of this review was to systematically synthesize and evaluate the current evidence available on the association between trauma, PTSD, and self-compassion at both clinical and subclinical levels, in both (a) cross-sectional and (b) intervention studies (i.e., are PTSD symptoms reduced following intervention).

2 | METHOD

2.1 | Search strategy and data sources

The systematic review was developed in accordance with the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2009). The search combined terms indicative of PTSD or trauma and self-compassion obtained by examining relevant papers, synonyms, and definitions (see Table 1). No year range was specified, and the final literature search was completed on February 3, 2019, using the following electronic databases: Ovid Medline (1950–Present), PsyINFO (1806–Present), Embase (1996–Present), and Web of Science (1900–Present). To increase the coverage of the review, an additional database was included: PILOTS (Published International Literature on Traumatic Stress; 1980–Present), a specialized PTSD research database maintained by the U.S. National Center for PTSD of the Department of Veteran Affairs.

2.2 | Data extraction

The inclusion criteria used in the screening process are presented in Table 2. Independent screening of all titles and abstracts was

TABLE 1 Search terms

Concept	Search terms
Component 1: Trauma and PTSD	trauma; psychological trauma; child* trauma; complex trauma; developmental trauma; early life trauma; posttraumatic stress; post-trauma*; posttrauma*; PTSD; abuse; child* abuse; emotional abuse; physical abuse; sexual abuse; child* neglect; neglect; child* adversity; child* maltreatment; maltreatment; early life stress; adverse life events; adverse childhood events; ACE; childhood trauma questionnaire; CTQ; rape; sexual violence; sexual assault; incest; bull*; intimidat*; victimis*; psychological stress; emotional stress; intimate partner violence; domestic violence; assault
Component 2: Self-compassion	self-compassion; self compassion

TABLE 2 Study inclusion criteria used in the screening process

Inclusion criteria
• Published studies (papers that have undergone a peer-review process)
• Empirical design
• Quantitative design
• English
• Adults in clinical and nonclinical samples
• Validated self-compassion measure
• Validated trauma and/or PTSD measure
• Explicit analysis of the relationship between trauma/PTSD and self-compassion
• No restrictions were placed on the type of trauma, or the amount of time since trauma before the measures were taken
• No restrictions were placed on publication dates

undertaken by two reviewers to reach consensus regarding the study selection criteria. There was 92% agreement between reviewers. In instances of discrepancy, consensus was achieved through discussion. Full-text versions were reviewed if further clarity was required. The data extracted from each study were relevant to the review's aims and included authors, year of publication, country of publication, demographics of study population, outcome measures, and type of trauma; intervention model and statistics reported for variables of interest.

2.3 | Methodological quality

All retrieved articles were critically appraised in terms of their methodological strengths and limitations, to identify potential sources of bias in the review. Cross-sectional studies were rated for methodological quality using the Newcastle–Ottawa Scale (NOS; Modesti et al., 2016; Wells et al., 2013). The NOS is used to assess the methodological quality of nonrandomized trials and has acceptable validity and reliability. The assessment tool focuses on three main methodological features: (a) the selection of the groups, (b) the comparability of the groups, and (c) the ascertainment of the outcome of interest. The average overall NOS rating score was 5.7 (out of a possible 10 points and a score of 5 or greater being indicative of satisfactory methodological quality). Experimental studies were rated for methodological quality using the Downs and Black Checklist (Downs & Black, 1998). The checklist contains 27 items that evaluate the quality of reporting, external validity, internal validity (bias and confounding), and power. The average overall rating for experimental studies was 18.5 (out of a possible 30 points and a score of 15 or greater being indicative of satisfactory methodological quality). Studies were not excluded on the basis of receiving a poor quality rating; rather, the assessment was used to examine the quality of the evidence when synthesizing findings. Quality ratings are shown in Tables 3 and 4 (for further information on quality ratings, see Appendix A).

3 | RESULTS

3.1 | Overview of search

Figure 1 depicts a summary of the searching and screening process, including reasons for exclusion, based on PRISMA recommendations. The studies reviewed were heterogeneous in terms of design and measures used. There was a significant within- and between-subject variation in terms of sociodemographic variables. The sample characteristics and key findings of the included cross-sectional and intervention studies are described in Tables 3 and 4, respectively.

3.2 | Study characteristics

This process yielded 35 published empirical papers (4.5% of the total initial pool), all published between 2008 and 2019, with more than half published in the last 4 years. The studies were conducted in various countries including the United States (n = 27), the United Kingdom (n = 4), Norway (n = 1), Germany (n = 1), the Netherlands (n = 1), and China (n = 1). Twenty studies used nonclinical samples recruited via university advertising or online, 14 of which specified trauma exposure as a requirement for participation. The 15 remaining studies reported on clinical samples; war veterans (n = 8; Bergen-Cico et al., 2018; Dahm et al., 2015; Held & Owens, 2015; Hiraoka et al., 2015; Kearney, McManus, Martinez, Felleman, & Simpson, 2013; Lang et al., 2017; Meyer et al., 2018, 2019), adults with PTSD recruited from PTSD or trauma-specific outpatient settings (n = 3; Hoffart et al., 2015; Karatzias et al., 2018; Müller-Engelmann et al., 2018), adults with PTSD recruited from outpatient settings (n = 2; Beaumont, Galpin, & Jenkins, 2012; Scoglio et al., 2018), firemen with PTSD (n = 1; Beaumont, Durkin, McAndrew, & Martin, 2016), and individuals in substance abuse treatment (n = 1; Held, Owens, Thomas, White, & Anderson, 2018). Twenty-four included studies employed a cross-sectional design, and 11 studies were experimental. Of the cross-sectional designs, two studies included comparison or control groups, five experimental studies compared interventions, and one employed a control group.

The sample sizes ranged from 10 to 667 participants. Sample mean ages ranged from 18.71 years (Miron, Orcutt, Hannan, & Thompson, 2014) to 57.9 years (Lenferink, Eisma, de Keijser, & Boelen, 2017). The 35 studies represented 32 participant samples, with a combined sample of n = 6348.

3.3 | Measurement of self-compassion

All studies used either the SCS (Neff, 2003; n = 16), the Self-Compassion Scale—Short Form (Raes et al., 2011; n = 7), or the Fear of SCS (Gilbert et al., 2011; n = 3).

TABLE 3 Cross-sectional study characteristics and main findings

First author, year, and country	Qual (NO)	Participants: *N* (% female) Mean age (*SD*)	Participants: Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Measures: Trauma	Measures: Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Key findings on the relationship between trauma, PTSD, and self-compassion: Trauma findings
Barlow et al., 2017 United States	4	466 (74.4%) *M* = 21.21 (*SD* = 5.83)	General population recruited through university Childhood abuse and trauma (NR)	IES	CAT	SCS	–: SC and PTSD (–0.33; $p < .001$)	–: SC and child abuse and trauma (–0.33; $p < .001$) –: SC and sexual abuse (–0.16; $p < .01$), punishment (–0.20; $p < .001$), neglect (–0.33; $p < .001$) and emotional abuse (–0.34; $p < .001$)
Bistricky et al., 2017 United States	5	132 (86.4%) *M* = 35.7 (*SD* = 12.2)	Trauma-exposed sample recruited online and in university Interpersonal Trauma (100%) 54.5%—in clinical range for probable PTSD	PCL-C	THQ	SCS-SF	–: SC and PTSD (–0.561; $p < .01$)	–: SC and Trauma (–0.24; $p < .01$)
Boykin et al., 2018 United States	5	288 (100%) *M* = 19.22 (*SD* = 1.46)	Trauma-exposed sample recruited through university Childhood maltreatment (NR)	PCL-5	CTQ	FCS	+: FSC and PTSD (0.28; $p < .05$)	+: FSC and childhood maltreatment (0.29; $p < .001$) ⇑ Fear of SC and ⇑ PTSD in mod to severe maltreatment
Dahm et al., 2015[a] United States	7	115 (16.5%) *M* = 37.41 (*SD* = 10.20)	Trauma-exposed U.S. Iraq/Afghanistan war veterans Military (100%) 42%—met criteria for current military-related PTSD	CAPS	—	SCS	–: SC and PTSD (–0.64; $p < .001$)	
Hamrick et al., 2018 United States	6	207 (100%) *M* = 27.07 (*SD* = 9.62)	Female survivors of sexual assault in adulthood Sexual assault (100%; 27.5% had history of CSA) 56.6%—in clinical range for probable PTSD	PCL-5	THS	SCS-SF	–: SC and PTSD (–0.31; $p < .001$)	NS: SC between CSA Vs. Non-CSA ⇑ PSTD in CSA Vs. Non-CSA

(Continues)

TABLE 3 (Continued)

First author, year, and country	Qual (NO)	Participants: *N* (% female) Mean age (*SD*)	Participants: Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Measures: Trauma	Measures: Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Key findings on the relationship between trauma, PTSD, and self-compassion: Trauma findings
Hawkins et al., 2018 United Kingdom	7	91 (72.5%) *M* = 33.62 (*SD* = 8.78)	Parents and primary caregivers paediatric burn victim Traumatic incident happened to child (100%) 32.8% ♀ and 40% ♂—in clinical range for posttraumatic stress symptoms	IES-R	—	SCS-SF	–: SC and PTSD (–0.30; $p < .05$)	
Hiraoka et al., 2015[a] United States	6	115 (16.5%) *M* = 37.41 (*SD* = 10.2)	Iraq and Afghanistan war veterans recruited through state Veterans Health Care System Military (100%) 41.7%—met criteria for current PTSD at baseline	CAPS	—	SCS	–: SC and PTSD at baseline (–0.64; $p < .001$) –: SC at baseline and PTSD at 12-month follow-up (–0.64; $p < .001$) –: SC and each of the three DSM-IV PTSD symptom clusters at baseline and follow-up	–: SC and combat exposure (–0.64; $p < .001$)
Karatzias et al., 2018 United Kingdom	6	106 (93.4%) *M* = 39.25 (*SD* = 10.94)	Individuals referred to an NHS trauma centre for psychological therapy Varied (100%; physical assault [95.1%], and emotional abuse during childhood [93.1%]) 17.3% and 62.5%—met criteria for PTSD and CPTSD, respectively	ITQ	CTQ LEC	SCS	NS: SC subscales and three PTSD symptom clusters –: Each SC subscale and hypoactivation and negative self-concept symptom clusters of CPTSD –: SC subscales (self-kindness, self-judgment, common humanity, and isolation) and disturbances in relationships –: SC subscale Over-identification and hyperactivation cluster	
Lenferink et al., 2017 Netherlands	8	137 (67.2%) *M* = 57.9 (*SD* = 14.1)	Relatives of missing persons (100%)	PCL-5	—	SCS	–: SC and PTSD (–0.46; $p < .001$)	

(Continues)

TABLE 3 (Continued)

First author, year, and country	Qual (NO)	Participants: N (% female) Mean age (*SD*)	Participants: Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Measures: Trauma	Measures: Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Key findings on the relationship between trauma, PTSD, and self-compassion: Trauma findings
Maheux et al., 2015 United States	7	226 (56.6%) S1: 74 *M* = 23.36 (*SD* = 8.83) S2: 152 *M* = 35.0 (*SD* = 11.63)	Trauma-exposed sample recruited online and in university Varied (100%) S1: 76.9% and S2: 68.8%—in clinical range for probable PTSD	PCL-C PCL-5	LEC-5	SCS-SF	⇓ SC in those with likely PTSD than those with unlikely PTSD –: Sc and avoidance, but not reexperiencing and hyperarousal in Sample 1 –: SC and avoidance, reexperiencing, hyperarousal and dysphoria in Sample 2 ⇑ PTSD for sexual assault group	NS: SC by trauma type or for exposure to multiple types
Maheux et al., 2016 United States	8	599 (50.3%) *M* = 34.08 (*SD* = 10.99)	Trauma-exposed sample recruited online Varied (100%) 19.9%—in clinical range for probable PTSD	PCL-5	LEC-5	SCS-SF	–: SC and PTSD symptoms (–0.37; $p < .01$) –: SC re-experiencing, avoidance, numbing, and hyperarousal ⇓ SC = ⇑ PTSD after controlling for exposure to multiple types of traumas	
McLean et al., 2018 United States	3	27 (100%) *M* = 37.74 (*SD* = 16.16)	Female survivors of interpersonal trauma experiencing distress in relation to the trauma Interpersonal trauma (100%)	PCL-5 TSI	SLESQ LEC-5	SCS	–: SC and PTSD (–0.64; $p < .01$) –: SC and subscales on the TSI: Anxious Arousal, Depression, Defensive Avoidance, and Dissociation NS: SC and subscales on the TSI: Anger/Irritability, Intrusive Experiences, Sexual concerns and dysfunctional sexual behaviour –: SC and CPTSD symptoms: Impaired Self-Reference and	

(Continues)

TABLE 3 (Continued)

First author, year, and country	Qual (NO)	Participants: *N* (% female) Mean age (*SD*)	Participants: Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Measures: Trauma	Measures: Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Key findings on the relationship between trauma, PTSD, and self-compassion: Trauma findings
							Tension Reduction Behaviour	
Meyer et al., 2018[a] United States	8	117 (16.2%) *M* = 37.33 (*SD* = 10.15)	Iraq and Afghanistan war veterans recruited through state Veterans Health Care System Military (100%)	CAPS	—	SCS	–: SC and lifetime worst PTSD symptoms (–0.41; $p < .01$) –: SC and PTSD symptoms at baseline (–0.63; $p < .01$) and follow-up (–0.58; $p < .01$)	
Meyer et al., 2019[a] United States	7	117 (16.2%) *M* = 37.33 (*SD* = 10.15)	Iraq and Afghanistan war veterans recruited through state Veterans Health Care System Military (100%)	CAPS	CWE	SCS	–: SC and lifetime worst PTSD symptoms (–0.41; $p < .01$) –: SC and PTSD at baseline (–0.63; $p < .01$) and follow-up (–0.41; $p < .01$)	–: SC and combat exposure (–0.63; $p < .001$)
Miron et al., 2014 United States	5	667 (100%) *M* = 18.71 (*SD* = 1.03)	Females recruited through university Childhood abuse (NR)	—	TLEQ FEQ	SCS		–: CEA and SC
Miron et al., 2015 United States	5	263 (64.9%) *M* = 20.3 (*SD* = 1.69)	Trauma-exposed sample recruited through university Varied (100%)	PSDS	TLEQ	SCS FSC-SC	+: FSC and PTSD (0.38; $p < .001$)	
Miron et al., 2016 United States	6	377 (63.9%) *M* = 19.12 (*SD* = 1.73)	General population recruited through university Childhood abuse (NR)	PSDS	TLEQ	SCS FSC-SC	⇑ PTSD for any type of child abuse ⇑ PTSD for those with combined CPA/CSA history –: SC and FSC (0.40; $p < .001$) –: SC and PTSD (–0.26; $p < .001$) +: FSC and PTSD	⇓ SC for any type of abuse ⇑ FSC for any type of abuse ⇑ FSC for those with combined CPA/CSA history
Pinciotti et al., 2017 United States	5	648 (72%) *M* = 21.3 (*SD* = 2.04)	Trauma-exposed sample recruited through university Varied (100%)	PSDS	TLEQ	SCS	–: SC and PSDS-B, PSDS-C, PSDS-D	

(Continues)

TABLE 3 (Continued)

First author, year, and country	Qual (NO)	Participants: *N* (% female) Mean age (*SD*)	Participants: Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Measures: Trauma	Measures: Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Key findings on the relationship between trauma, PTSD, and self-compassion: Trauma findings
Reffi et al., 2018 United States	5	245 (100%) *M* = 19.27 (*SD* = 1.50)	Trauma-exposed sample recruited through university Childhood maltreatment (40.8% endorsed "mod to extreme" levels of childhood maltreatment in at least one of the five categories)	—	CTQ-SF	SCS		–: SC and Maltreatment (–0.21; $p < .001$)
Scoglio et al., 2018 United States	7	176 (100%) *M* = 41.18 (*SD* = 12.45)	Female survivors of interpersonal violence with a primary diagnosis of PTSD Interpersonal violence (100%) 100%—in clinical range for probable PTSD	CAPS	—	SCS-SF	–: SC and PTSD (–0.28; $p < .01$)	
Seligowski et al., 2015 United States	5	453 (65.7%) *M* = 19.75 (*SD* = 3.07)	Trauma-exposed sample recruited through university Varied (100%)	PSDS	TLEQ	SCS	–: SC and PSDS-B, PSDS-C, PSDS-D –: PSC (+ve SC components) and PSDS –C, PSDS-D –: NSC (–ve SC components) and PSDS-B, PSDS-C, PSDS-D	
Tarber et al., 2016 United States	4	182 (0%) *M* = 26.51 (*SD* = 11.04)	Male survivors of maltreatment recruited through listservs, online and through university Childhood maltreatment (37.4%)	TSC-40	—	SCS-SF	–: SC and psychological distress (symptoms associated with PTSD and additional symptoms)	⇓ SC for the childhood maltreatment group than the no childhood maltreatment group
Thompson et al., 2008 United States	4	210 (62.4%) Mean and SD not reported	General population recruited through university Varied (47.6%) 10.5%—in clinical range for probable PTSD	PDS	—	SCS	–: SC and avoidance subscale	

(Continues)

TABLE 3 (Continued)

First author, year, and country	Qual (NO)	Participants: *N* (% female) Mean age (*SD*) Sample and setting Type of trauma event/s (% exposed to trauma) Presence of PTSD	Measures: PTSD	Trauma	Self-C	Key findings on the relationship between trauma, PTSD, and self-compassion: PTSD findings	Trauma findings
Wu et al., 2018 China	3	358 (63.1%) *M* = 19.18 (*SD* = 1.46) General population recruited through university Childhood maltreatment (NR)	—	CTQ-SF	SCS		–: SC and emotional abuse (–0.12; $p < .05$) and emotional neglect (–0.12; $p < .05$)

Note. FSC: fear of self-compassion; NS: no significant difference; SC: self-compassion; –: significant negative correlation; +: significant positive correlation; ⇑: significantly higher/significant increase; ⇓: significantly lower/significant decrease.

PSDS-B, re-experiencing cluster; PSDS-C, avoidance/numbing cluster; PSDS-D, hyperarousal cluster.

Abbreviations: CAPS, Clinician-Administered PTSD Scale for DSM-IV (Blake et al., 1995); CAT, Child Abuse Trauma Scale (Sanders & Becker-Lausen, 1995); CTQ, Childhood Trauma Questionnaire (Bernstein & Fink, 1998); DTS, Davidson Trauma Scale (Davidson et al., 1997); FEQ, Family Experiences Questionnaire (Briere & Runtz, 1990; used items for childhood physical and emotional abuse); FCS-SC, Fear of Compassion Scales–Self-Compassion (Gilbert et al., 2011); IES, Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979); IES-R, Impact of Events Scale-Revised (Weiss & Marmer, 1997); ITQ, International Trauma Questionnaire (version 1.2; Cloitre, Garvert, Weiss, Carlson, & Bryant, 2014); LEC-5, Life Events Checklist-5 (Weathers et al., 2013a); PCL-5, PTSD Checklist-5 (Weathers et al., 2013b); PCL-C, PTSD Checklist-Civilian (Weathers, Litz, Herman, Huska, & Keane, 1993); PDS, Posttraumatic Stress Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997); PSDS, PTSD Screening and Diagnostic Scale (Kubany et al., 2000); PSS-I, PTSD Symptom Scale-Interview (Foa, Riggs, Dancu, & Rothbaum, 1993); SCS, Self-compassion Scale (Neff, 2003); SCS-SF, Self-compassion Scale-Short Form (Raes et al., 2011); SLESQ, Stressful Life Events Screening Questionnaire (Goodman, Corcoran, Turner, Yuan, & Green, 1998); THQ, Trauma History Questionnaire (Green, 1996); THS, Trauma History Screen (Carlson et al., 2011); TLEQ, Traumatic Life Events Questionnaire (Kubany et al., 2000); TSC, Trauma Symptom Checklist-40 (Elliott & Briere, 1992); TSI, Trauma Symptom Inventory (Briere, Elliott, Harris, & Cotman, 1995).

[a]All four studies utilized the same sample.

TABLE 4 Intervention study characteristics and main findings—Studies are grouped broadly by intervention model

First author, year and country		Participants		Measures			Type of intervention and key findings on the relationship between trauma, PTSD, and self-compassion (effect sizes reported when available)
	Qual (D&B)	Trauma	Self-C	PTSD	Trauma	Self-C	
							Cognitive Behavioural Therapy Based Interventions (CBT)
Beaumont et al., 2016 United Kingdom	18	17 (29.4%) TF-CBT *M* = 41.3 TF-CBT and CFT *M* = 43.2	Active duty firefighters Fire service work-related trauma (100%) All experiencing trauma-related symptoms	IES-R	—	SCS-SF	CBT: Trauma-focused cognitive behavioural therapy (TF-CBT) vs. TF-CBT PLUS compassion-focused therapy (CFT; 12 weeks) ⇑ SC for TF-CBT plus CFT group compared with TF-CBT (η^2 = .334) ⇓ PTSD for both groups
Beaumont et al., 2012 United Kingdom	19	32 (NR) *M* = not reported	Trauma-exposed sample referred for CBT Varied trauma (100%) All with symptoms of PTSD	IES-R	—	SCS-SF	CBT: CBT vs. CBT plus compassionate mind training (CMT; 12 sessions) ⇑ SC for CBT plus CMT compared with CBT ⇓ PTSD for both groups
Hoffart et al., 2015 Norway	20	65 (58.5%) *M* = 45.2 (*SD* = 9.7)	Individuals referred to a PTSD treatment programme in a residential clinic Varied (100%) 100%—in clinical range for probable PTSD	PSS-SR PSS-I	—	SCS	CBT: Standard prolonged exposure (inc. imaginal exposure [IE]) vs. modified prolonged exposure (inc. imagery rescripting [IR]; 10 weeks) No group differences in SC ⇑ SC subscales: self-kindness and mindfulness (common humanity did not) ⇓ SC subscales: self-judgment, isolation and overidentification ⇑ Subscale self-kindness = ⇓ PTSD ⇓ Subscales self- judgment, isolation, and overidentification = ⇓ PTSD ⇓ PTSD for both groups (IE—Hedges' *g* = 1.31; IR—Hedges' *g* = 0.84)
							Compassion-based interventions (CBI)
Au et al., 2017 United States	17	10 (80%) *M* = 22.3 (*SD* = 5.03)	Community sample of trauma-exposed adults Varied trauma (100%; 80% sexual assault) 100%—in clinical range for probable PTSD	PCL-5	TLEQ	SCS	CBI: Compassion-based therapy—multiple baseline design (6 weeks) ⇑ SC following intervention and at follow-up (Cohen's *d* = 2.26) ⇓ PTSD following intervention and at follow-up (Cohen's *d* = 2.26)

(Continues)

TABLE 4 (Continued)

First author, year and country		Participants		Measures			Type of intervention and key findings on the relationship between trauma, PTSD, and self-compassion (effect sizes reported when available)
	Qual (D&B)	Trauma	Self-C	PTSD	Trauma	Self-C	
Held et al., 2015 United States	16	27 (0%) *M* = 53.6 (*SD* = 8.6)	Homeless male veterans living in transitional housing Varied (100%)	PCL-S	THS	SCS	CBI: Self-Compassion Workbook Training vs. Stress Inoculation Workbook (self-admin over 4 weeks) ⇑ SC for both groups (partial η^2 = .153) NS: PTSD in either group following intervention
Held et al., 2018 United States	15	19 (31.4%) *M* = 34.68 (*SD* = 9.64)	Individuals in intensive outpatient SUD treatment facility Varied (NR) 72%—in clinical range for probable PTSD	PCL-5	—	SCS	CBI: Brief Self-Compassion Training (4 sessions) ⇑ SC total score (Cohen's *d* = 0.66) and subscales of Kindness (*d* = 0.78), Common Humanity (*d* = 0.50), and Mindfulness (*d* = 0.49) ⇓ Subscales of overidentification (*d* = –0.50) and isolation (*d* = –0.62) NS: PTSD following intervention
Kearney et al., 2013 United States	18	42 (41.9%) *M* = 53.6 (*SD* = 8.6)	Veterans with current PTSD Military (100%) 100%—met criteria for PTSD	PSS-I	LEC-5	SCS	CBI: Loving-kindness meditation course (12 weeks) –: SC and PTSD at baseline ⇑ SC following intervention and at 3-month follow-up (Cohen's *d* = 0.92) ⇓ PTSD following intervention and at 3-month follow-up (Cohen's *d* = –0.89) Change in SC significantly mediated changes in PTSD symptoms
Lang et al., 2017 United States	18	36 (19.4%) *M* = 43.9 (*SD* = 12.6)	Veterans with PTSD Military (100%) 97%—PTSD diagnosis (1 = subsyndromal PTSD)	PCL-5	LEC	SCS-SF	CBI: Cognitively based Compassion Training (CBCT®), for use with veterans with PTSD (8–10 sessions) NS: SC following intervention ⇓ PTSD following intervention (Cohen's *d* = 0.27)
Müller-Engelmann et al., 2018 Germany	19	14 (78.6%) *M* = 41.14 (*SD* = 12.30)	Survivors of interpersonal violence recruited from the W/L of a specialized PTSD outpatient centre Interpersonal violence (100%) 100%—PTSD diagnosis	CAPS DTS	LEC-5	SCS	CBI: Trauma-Adapted Mindfulness and Loving-Kindness Intervention—Multiple baseline (8 sessions) ⇑ SC following intervention (Two factors: self-compassion Hedges' *g* = 0.77 and self-criticism *g* = 0.74) ⇓ PTSD following intervention (Hedges' *g* = 1.66)

(Continues)

TABLE 4 (Continued)

First author, year and country		Participants		Measures			Type of intervention and key findings on the relationship between trauma, PTSD, and self-compassion (effect sizes reported when available)
	Qual (D&B)	Trauma	Self-C	PTSD	Trauma	Self-C	
							Alternative interventions (Alt)
Bergen-Cico et al., 2018 United States	21	48 (0%) D2V – *M* = 41 (*SD* = 12) WC – *M* = 43 (*SD* = 11)	Veterans attending a nonclinical veteran recreation facility Military (100%) 100%—in clinical range for probable PTSD	PCL-M	—	SCS-SF	ALT: Dogs2Vets program (D2V) - structured dog training and adoption vs. waitlisted controls (WC) ⇑ SC for intervention group compared with control group (Cohen's *d* = 0.37) ⇓ PTSD for intervention group compared with control group (Cohen's *d* = –0.28)
Valdez et al., 2016 United States	22	63 (100%) *M* = 31.48 (*SD* = 12.76)	Female trauma survivors recruited in community and university "Intentionally caused" trauma (i.e., sexual and/or physical assault; 100%) 32.3%—in clinical range for probable PTSD	PCL-C	TLEQ	SCS	ALT: Experimental groups/three processing conditions (analytic processing, experiential processing, and control; 1 session) –: SCS subscale Self-kindness and PTSD –: SCS subscale Mindfulness and PTSD –: SCS subscale Self- kindness and less emotional numbing and hyperarousal –: SCS subscale Mindfulness and less emotional numbing and hyperarousal NS: SCS subscale Common humanity not related to PTSD or symptom clusters

Note. FSC: fear of Self-compassion; SC: self-compassion; –: significant negative correlation; +: significant positive correlation; ⇑: significantly higher/significant increase; ⇓: significantly lower/significant decrease; NS: no significant difference.

PSDS-B, re-experiencing cluster; PSDS-C, avoidance/numbing cluster; PSDS-D, hyperarousal cluster.

Abbreviations: CAPS, Clinician-Administered PTSD Scale for DSM-IV (Blake et al., 1995); CAT; Child Abuse Trauma Scale (Sanders & Becker-Lausen, 1995); CTQ, Childhood Trauma Questionnaire (Bernstein & Fink, 1998); DTS, Davidson Trauma Scale (Davidson et al., 1997); Family Experiences Questionnaire (Briere & Runtz, 1990; used items for childhood physical and emotional abuse); FCS-SC, Fear of Compassion Scales–Self-Compassion (Gilbert et al., 2011); IES, Impact of Event Scale (Horowitz et al., 1979); IES-R, Impact of Events Scale-Revised (Weiss & Marmer, 1997); ITQ, International Trauma Questionnaire (version 1.2; Cloitre et al., 2014); LEC-5, Life Events Checklist-5 (Weathers et al., 2013a); PCL-5, PTSD Checklist-5 (Weathers et al., 2013b); PCL-C, PTSD Checklist-Civilian (Weathers et al., 1993); PDS, Posttraumatic Stress Diagnostic Scale (Foa et al., 1997); PSDS, PTSD Screening and Diagnostic Scale (Kubany et al., 2000); PSS-I, PTSD Symptom Scale-Interview (Foa et al., 1993); SCS, Self-compassion Scale (Neff, 2003); SCS-SF, Self-compassion Scale-Short Form (Raes et al., 2011); SLESQ, Stressful Life Events Screening Questionnaire (Goodman et al., 1998); THQ, Trauma History Questionnaire (Green, 1996); THS, Trauma History Screen (Carlson et al., 2011); TLEQ, Traumatic Life Events Questionnaire (Kubany et al., 2000); TSC, Trauma Symptom Checklist-40 (Elliott & Briere, 1992); TSI, Trauma Symptom Inventory (Briere et al., 1995).

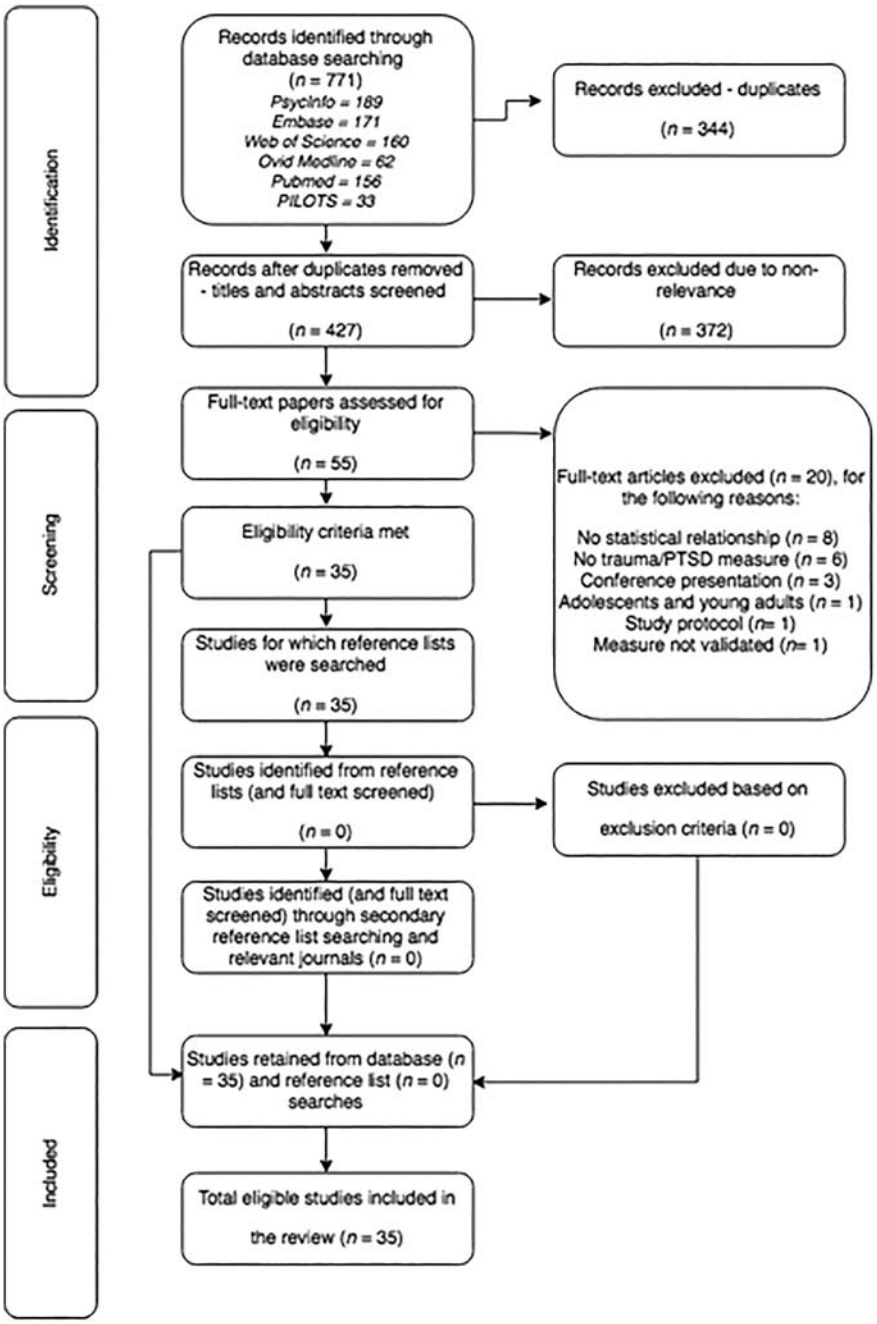

FIGURE 1 PRISMA flow diagram of the selection process

3.4 | Measurement of trauma and PTSD

Twenty-one included studies adopted self-report measures of trauma. The most commonly used measures in the studies were the Life Events Checklist (Weathers et al., 2013a; *n* = 7), the Traumatic Life Events Questionnaire (Kubany et al., 2000; *n* = 6), and the Childhood Trauma Questionnaire (Bernstein & Fink, 1998; *n* = 4). Thirty-two of the 35 included studies adopted either self-report or clinician administered measures of PTSD. The most commonly used measures in the studies were the PTSD Checklist (Weathers et al., 2013b; *n* = 14) and the Clinician-Administered PTSD Scale for DSM-IV (Blake et al., 1995; *n* = 5), both of which are validated measures with good reliability/consistency. The majority of studies reported the relationship between self-compassion to dimensional measures of symptoms, rather than to a diagnosis.

3.5 | Aim 1—To examine the evidence regarding the relationship between trauma and/or PTSD and self-compassion

Two studies compared self-compassion in trauma-exposed individuals with non-trauma-exposed individuals. Tarber, Cohn, Casazza, Hastings, and Steele (2016) identified that self-compassion

was significantly lower for the childhood maltreatment group compared with the no childhood maltreatment in an all-male sample (Tarber et al., 2016). Boykin et al. (2018) identified that participants reporting moderate to severe childhood maltreatment endorsed significantly higher levels of fear of self-compassion as compared with participants with minimal to no childhood maltreatment in an all-female sample (Boykin et al., 2018).

A summary of bivariate correlations between self-compassion, fear of self-compassion, and PTSD total score and symptom clusters is presented in Table 5. Of the studies that reported correlational data about the relationship between self-compassion and PTSD (defined using DSM-IV or DSM-5 criteria; n = 14), five reported a strong, significant negative relationship, six studies reported a moderate, significant negative relationship, and two, a weak, significant negative relationship. Only one study reported no significant relationship when using a sample of trauma exposed adults, where 62.5% met the International Classification of Diseases 11 (ICD-11) criteria for complex PTSD. Overall, findings indicate that as self-compassion increased, current symptomatology decreased. Three studies utilized the Fear of Self-compassion measure (Gilbert et al., 2011), with two reporting a strong, significant positive relationship and the third reported a weak, significant positive relationship between fear of self-compassion and PTSD.

A portion of studies reported correlational data about the relationship between self-compassion and PTSD symptom clusters (n = 8). This was not identified as a specific aim of the study; however, the authors deemed it important in terms of the tentative patterns that were observed. Table 5 outlines the strength of relationships across studies. Hiraoka et al. (2015) found the strongest relationship, reporting a strong, significant negative relationship between self-compassion and all three PTSD symptom clusters, in a military sample. Overall, the strength of the relationship varied across studies. Notably, the Avoidance cluster demonstrated the most consistent relationship across the most studies.

Seven studies explored these relationships further using regression analysis. Of the five studies that investigated whether self-compassion was a significant individual predictor of PTSD symptoms (Dahm et al., 2015; Hiraoka et al., 2015; Maheux & Price, 2015; Meyer et al., 2019), only one found this not to be the case (Hawkins, Centifanti, Holman, & Taylor, 2018). Interestingly, this study examined parental adjustment following paediatric burn injuries, so although posttraumatic stress symptoms were measured, the index trauma is significantly different to those typically associated with PTSD and other long-term negative sequelae. Maheux and Price (2015) evaluated PTSD symptoms and self-compassion in two trauma-exposed samples using measures that corresponded to DSM-IV and DSM-5 criteria and found that DSM-IV avoidance was the only cluster associated with self-compassion; however, self-compassion was negatively related to all of the DSM-5 PTSD symptom clusters. This could be as result of differing samples (university vs. community) or a qualitative difference in the symptom clusters. One study looked at both ICD-11 PTSD and CPTSD symptom clusters, finding no significant relationship for PTSD; however, self-compassion subscales, self-judgment and common humanity, significantly predicted hypoactive affect dysregulation symptoms, and the subscales self-judgment and isolation significantly predicted negative self-concept symptoms (Karatzias et al., 2018). Finally, one study found a significant main effect of fear of self-compassion on PTSD and with further analyses that individuals reporting high fear of self-compassion were especially likely to report elevated posttraumatic stress symptoms when concurrently reporting high levels of psychological inflexibility (Miron, Sherrill, & Orcutt, 2015).

Ten of the papers employed mediational analysis to explore the relationships between self-compassion, trauma, and PTSD. One study found a significant direct relationship between self-compassion and PTSD (Bistricky et al., 2017), and four studies found indirect relationships via interpersonal competence (Bistricky et al., 2017), emotional dysregulation (Barlow et al., 2017), self-blame attributions, and disengagement coping (Hamrick & Owens, 2018) and grief ruminations (Lenferink et al., 2017). Scoglio et al. (2018) reversed the constructs and found that emotion regulation also mediated the relationship between PTSD and self-compassion. Some studies also looked at the mediating effects of self-compassion, finding that it partially mediated relationships between the following: social support and PTSD (Maheux & Price, 2016), childhood maltreatment and ER (Reffi, Boykin, & Orcutt, 2018), and emotional abuse and depression (Wu, Chi, Lin, & Du, 2018). One study also found that self-compassion partially mediated the relationship between distress and well-being for a sample of men who had experienced maltreatment in childhood and controls. Two studies explored the mediating effect of fear of self-compassion finding that it partially mediated relationships between childhood maltreatment and PTSD (Boykin et al., 2018) and childhood sexual abuse and PTSD (Miron, Seligowski, Boykin, & Orcutt, 2016), with the latter study finding that, in contrast, self-compassion did not have any effect on the relationship.

Three studies compared self-compassion by trauma type. Miron et al. (2016) identified that participants who experienced any type of child abuse reported significantly lower self-compassion scores and significantly higher fear of self-compassion scores than those without a childhood sexual abuse (CSA) or childhood physical abuse history. They found no significant difference in self-compassion scores based on child abuse type, however there were significant differences in fear of self-compassion scores, with those with a history of combined childhood physical abuse/CSA history reported significantly higher fear of self-compassion. They noted that this group also reported more PTSD symptoms (Miron et al., 2016). Maheux and Price (2015) found no difference in ratings of self-compassion by trauma type or by exposure to multiple types of traumatic events; however, they noted that participants who met criteria for PTSD reported lower levels of self-compassion (Maheux & Price, 2015). One study utilizing a nonclinical sample of female survivors of sexual assault found that participants with a history of CSA showed no significant difference in level of self-compassion compared with those with no history of CSA (Hamrick & Owens, 2018). No strong patterns emerged across trauma types; however, notable, physical abuse was not related self-compassion in two studies (Miron et al., 2014; Wu et al., 2018).

TABLE 5 Bivariate correlations between Self-compassion and PTSD total score and symptom clusters from cross-sectional studies

	Self-compassion										Fear of self-compassion		PTSD measure Used
	PTSD total score		Cluster B—Re-experiencing		Cluster C—Avoidance		Cluster D—Hyperarousal		Numbing (DSM-5)		PTSD total score		
Authors	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	
Barlow et al., 2017	−.33	<.001	—	—	—	—	—	—	—	—	—	—	IES
Bistricky et al., 2017	−.56	<.01	—	—	—	—	—	—	—	—	—	—	PCL-C
Boykin et al., 2018	—	—	—	—	—	—	—	—	—	—	.28	<.05	PCL-5
Dahm et al., 2015[b]	—	—	—	—	—	—	—	—	—	—	—	—	CAPS
Hamrick et al., 2018	−.31	<.001	—	—	—	—	—	—	—	—	—	—	PCL-5
Hawkins et al., 2018	−.30	<.05	—	—	—	—	—	—	—	—	—	—	IES-R
Hiraoka et al., 2015[b]	−.64	<.001	−.43	<.001	−.65	<.001	−.63	<.001	—	—	—	—	CAPS
Karatzias et al., 2018	ns	ns	ns	ns	ns	ns	ns	ns	—	—	—	—	ITQ
Lenferink et al., 2017	−.46	<.001	—	—	—	—	—	—	—	—	—	—	PCL-5
Maheux et al., 2015[a]	—	—	ns	ns	−.16	<.05	ns	ns	—	—	—	—	PCL-C
	—	—	−.14	<.001	−.08	<.001	−.21	<.001	—	—	—	—	PCL-5
Maheux et al., 2016	−.37	<.01	−.27	<.01	−.25	<.01	−.38	<.01	−.39	<.01	—	—	PCL-5
McLean et al., 2018	−.64	<.01	—	—	—	—	—	—	—	—	—	—	PCL-5
Meyer et al., 2018[b]	−.64	<.01	—	—	—	—	—	—	—	—	—	—	CAPS
Meyer et al., 2019[b]	−.63	<.01	—	—	—	—	—	—	—	—	—	—	CAPS
Miron et al., 2014	—	—	—	—	—	—	—	—	—	—	—	—	—
Miron et al., 2015	—	—	—	—	—	—	—	—	——	—	.38	<.001	PSDS
Miron et al., 2016	−.26	<.001	—	—	—	—	—	—	—	—	.40	<.001	PSDS
Pinciotti et al., 2017	—	—	−.14	<.05	−.22	<.05	−.22	<.05	—	—	—	—	PSDS
Reffi et al., 2018	—	—	—	—	—	—	—	—	—	—	—	—	—
Scoglio et al., 2018	−.28	<.01	—	—	—	—	—	—	—	—	—	—	CAPS
Seligowski et al., 2015	—	—	−.25	<.01	−.36	<.01	−.34	<.01	—	—	—	—	PSDS
Tarber et al., 2016	—	—	—	—	—	—	—	—	—	—	—	—	TSC-40
Thompson & Waltz, 2008	—	—	ns	ns	−.24	<.05	ns	ns	—	—	—	—	PDS

(Continues)

TABLE 5 (Continued)

	Self-compassion										Fear of self-compassion		PTSD measure Used
	PTSD total score		Cluster B—Re-experiencing		Cluster C—Avoidance		Cluster D—Hyperarousal		Numbing (DSM-5)		PTSD total score		
Authors	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	
Wu et al., 2018	—	—	—	—	—	—	—	—	—	—	—	—	—
Kearney et al., 2013[c]	−.42	<.01	—	—	—	—	—	—	—	—	—	—	PSS-I

Note. ns = not significant.

Abbreviation: CAPS, Clinician-Administered PTSD Scale for DSM-IV; DSM-5, Diagnostic and Statistical Manual of Mental Disorders; IES, Impact of Event Scale; IES-R, Impact of Events Scale-Revised; ITQ, International Trauma Questionnaire; PCL-5, PTSD Checklist-5; PCL-C, PTSD Checklist-Civilian; PSDS, PTSD Screening and Diagnostic Scale; PSS-I, PTSD Symptom Scale-Interview; PTSD; posttraumatic stress disorder; TSC-40, Trauma Symptom Checklist-40.

[a]Study used two separate samples.

[b]All four studies utilized the same sample.

[c]An intervention study that reported correlations prior to intervention.

3.6 | Aim 2—Is there evidence in support of interventions that target self-compassion in adults following trauma exposure (i.e., are PTSD symptoms reduced following intervention)?

Table 4 outlines PTSD and self-compassion outcomes according to the intervention studies included and interventions are listed by predominant model: CBT; compassion-based intervention (CBI); or alternative model. Overall, interventions studies utilized small samples and tended to be feasibility studies or trials. Two studies compared the impact of CBT interventions, with the same intervention with a self-compassion adjunct, on PTSD symptoms (Beaumont et al., 2012; Beaumont, Durkin, Hollins-Martin, & Carson, 2016). Both found significant reductions in PTSD after intervention; however, the two intervention groups differed on self-compassion. Hoffart et al. (2015) examined whether self-compassion influenced PTSD symptoms in the process of change during standard and prolonged Imaginal Exposure interventions and found that the self-compassion components self-kindness, self-judgment, isolation, and overidentification had a within-person effect on subsequent PTSD symptoms, independent of therapy form (Hoffart et al., 2015).

Six of the studies examined predominantly CBI for reducing PTSD symptoms (Au et al., 2017; Held et al., 2018; Held & Owens, 2015; Kearney et al., 2013; Lang et al., 2017; Müller-Engelmann et al., 2018) and reducing trauma-related guilt and shame (Au, 2016; Held et al., 2018; Held & Owens, 2015). Three interventions found significant reductions in PTSD symptoms (Au, 2016; Kearney et al., 2013; Lang et al., 2017; Müller-Engelmann et al., 2018), and the three examining trauma-related guilt and shame found significant reductions. Only one study did not report significant improvements in self-compassion (Lang et al., 2017). Regarding alternative studies, one study compared three trauma processing conditions (analytic, experiential, and control) and found no group difference; however, higher self-kindness and mindfulness was associated with decreased PTSD symptoms for all conditions (Valdez & Lilly, 2016). Last, a therapeutic dog ownership and training programme was found to reduce PTSD symptoms and increase self-compassion compared with waitlisted controls (Bergen-Cico et al., 2018). Both studies that utilized a follow-up timepoint found that gains were maintained (2- and 4-week follow-up; Au et al., 2017; 3-month follow-up; Kearney et al., 2013).

4 | DISCUSSION

The aim of this systematic review was to summarize the available evidence on the relationship between self-compassion, trauma, and PTSD and the evidence in support of interventions targeting self-compassion in adults following trauma exposure (i.e., are PTSD symptoms reduced following intervention). This review of 35 studies suggests a meaningful relationship between self-compassion and trauma and/or PTSD. Overall, the most consistent findings from the systematic search were as follows: (a) Increased self-compassion was associated with reduced PTSD symptomatology and (b) there was some degree of improvement in PTSD symptoms (reduction in symptoms) following intervention in eight of the 11 systematically identified intervention studies.

First, the investigation that self-compassion differs among trauma-exposed adults and non-trauma-exposed adults was sparse in the reviewed papers, with only two studies comparing these groups (Boykin et al., 2018; Tarber et al., 2016); consequently, conclusions drawn about the comparisons are limited; however, findings indicated that decreased self-compassion and increased fear of self-compassion were associated with trauma. Similarly, only three studies compared self-compassion by trauma type (Hamrick & Owens, 2018; Maheux & Price, 2015; Miron et al., 2016). This highlights one of the many challenges with trauma research that trauma exposure is common and trauma types are not discrete, either in the general population or in

clinical groups, with individuals often exposed to more than one type across the lifespan. Although studies could benefit from nontrauma control conditions to determine the extent to which self-compassion is affected by exposure to traumatic events and the resulting symptomology, it is challenging to separate out and ultimately unrealistic given the prevalence of trauma exposure. Relatedly, Miron et al. (2014) noted that some traumas or abuses are less recognizable to the survivor, for example, emotional abuse and consequently underreported in studies. Importantly, these unacknowledged traumas could have contributed to the later impact of cumulative traumas (Follette et al., 1996; Stein et al., 2016). This should be taken into account when making observations about unique relationships between trauma types and other factors such as self-compassion.

In addition, many of the studies included utilized trauma-exposed samples and examined posttraumatic stress symptoms dimensionally and with self-report measures. Although scores on measures such as the PCL (Weathers et al., 2013b) suggest whether participants could have met PTSD diagnostic criteria, a categorical diagnostic status cannot be confirmed as it would by gold standard clinical interview. Self-report measures may introduce confounding factors such as bias, personality differences, or state mood that are then not adjusted for and can also lead to an overestimation of psychopathology when compared with diagnostic interviews (Engelhard et al., 2007). There are benefits to both approaches as using participants who were exposed to trauma but who did and did not meet full diagnostic criteria for PTSD represents a range of PTSD symptoms and recovery levels, consequently examining natural courses of recovery, rather than treatment effectiveness.

In the studies investigating associations between severity of PTSD symptomatology and self-compassion, significant relationships were found consistently, with higher self-compassion associated with lower PTSD symptoms. Similarly, the studies utilizing the fear of self-compassion measure found a significant positive relationship between it and PTSD, with lower fear of self-compassion associated with lower PTSD symptoms. As the majority of studies were cross-sectional, it is not possible to draw conclusions about causality. Ideally, future research will replicate current studies and extend the findings by employing longitudinal designs that allow for the examination of the impact of self-compassion on PTSD symptoms over time. Optimistically, one reviewed study reported strong longitudinal associations at both baseline and follow-up with a sample of veterans (Hiraoka et al., 2015; Meyer et al., 2018, 2019). In addition to longitudinal designs, prospective research with at-risk samples is warranted to help understand if self-compassion protects against the onset of PTSD symptoms and to determine the extent to which low self-compassion may represent a pretrauma risk factor for PTSD following trauma exposure (Hiraoka et al., 2015; Maheux & Price, 2015). This is particularly pertinent as both dominant models of self-compassion (Gilbert, 2009b; Neff, 2003) emphasize that self-compassion is likely influenced by early experiences. Conversely, it is also possible that individuals are better able to be self-compassionate as result of experiencing less symptomatology. Studies that indicate directionality could be particularly beneficial.

Following the precedent set by Thompson and Waltz's (2008) study, some studies investigated associations between self-compassion and PTSD symptom clusters, and whereas all clusters demonstrated a relationship, notably the avoidance cluster demonstrated the most consistent relationship across studies. Of note, Maheux and Price (2015) evaluated PTSD symptoms and self-compassion in two trauma-exposed samples using DSM-IV and DSM-5 criteria. They found that DSM-IV avoidance was the only cluster associated with self-compassion, whereas all of the DSM-5 PTSD symptom clusters were negatively related to self-compassion. This supports the correlational findings of Thompson and Waltz (2008) who, using DSM-IV clusters, found only the avoidance cluster associated with self-compassion. Maheux and Price's (2015) findings could be due to changes in the symptom clusters, as the avoidance cluster in the DSM-IV contained elements of both intentional experiential avoidance and dysphoria, and the DSM-5 has provided dysphoria symptoms with a unique cluster. Similarly, one study using ICD-11 (World Health Organization, awaiting release) PTSD criteria did not find a significant relationship but did for CPTSD that shares greater overlap of symptoms with the DSM-5 PTSD criteria. This highlights the potential impact of classification systems on findings. The findings for DSM-5 are promising and suggest that self-compassion may be an important overarching treatment target that can affect the broad range of PTSD symptoms.

It is worth considering that much of the existing research used the DSM-IV criteria, so tells us something about the relationship between that conceptualization of PTSD and self-compassion. Ten of the reviewed studies used DSM-5 criteria (Au et al., 2017; Boykin et al., 2018; Hamrick & Owens, 2018; Held et al., 2018; Lang et al., 2017; Lenferink et al., 2017; Maheux & Price, 2015, 2016; McLean, Fiorillo, & Follette, 2018). With the reformulation of the PTSD symptom clusters, it is likely that the expanded clusters, which now include persistent and exaggerated negative beliefs about oneself, distorted cognitions that leads to self-blame, and persistent negative emotional state such as guilt or shame, will be strongly negatively related to self-compassion, as demonstrated by Maheux and Price (2015). Future work should explore how the relation between the new criteria and self-compassion fits into broader theoretical models of PTSD to determine how specifically self-compassion protects against such symptoms.

The papers that employed statistical modelling techniques highlighted factors that were linked to self-compassion and persisting PTSD symptoms. Overall, the relationship between self-compassion and PTSD was often mediated by other variables, and self-compassion also acted as the mediator. Regarding ER, two studies demonstrated a negative association between self-compassion and ER difficulties and indicated that low levels of self-compassion may impact PTSD symptoms by impairing general ER strategies rather than by triggering specific PTSD reactions directly (Barlow et al., 2017; Scoglio et al., 2018). Self-compassion may aid acceptance and tolerance of difficult emotions rather than avoiding difficult emotions or engaging in self-criticism (Feliu-Soler et al., 2017). Increased self-compassion may reduce negative emotions and relatedly PTSD symptoms. This

supports previous findings in a sample of substance-abusing young adults indicating that self-compassion significantly mediated the relationship between history of childhood maltreatment and emotion regulation difficulties (Vettese, Dyer, Li, & Wekerle, 2011).

Relatedly, interpersonal competence also mediated the relationship between self-compassion and PTSD (Bistricky et al., 2017) that may play a part in accessing social support, re-establishing trust and safety, and increase motivation to engage in help-seeking and meet other relational needs. Findings also indicated that individuals who had higher levels of self-compassion tended to engage in less self-blame and disengagement coping and grief rumination which in turn were each associated with lower PTSD severity. Overall, findings suggest multiple pathways via which self-compassion might relate to PTSD and multiple possible targets for intervention.

Regarding intervention, 11 of the included studies were interventions that investigated the role of self-compassion either as therapy model, an adjunct to the therapy model, or as a mechanism of change in the treatment of PTSD. The majority were described as feasibility studies and utilized small samples. Evidence for the efficacy of therapy indicated mixed results, although tentatively promising. Overall, eight studies across all model types found evidence that interventions utilizing compassion-based models reduced PTSD symptoms; however, as findings were varied, no particular intervention type emerged as most effective. All three evidence-based CBT interventions (trauma-focused CBT, CBT, and PE) used comparison groups, and interestingly, in all three studies, both groups demonstrated significant reductions in PTSD symptoms; however, there was a significant group difference in self-compassion, indicating that the compassion-based adjunct had an impact on self-compassion. In two of the CBT studies (Beaumont, Durkin, McAndrew, et al., 2016; Beaumont et al., 2012), authors noted that although not significant, there was a trend towards greater significant change in PTSD symptoms for the groups with a self-compassion adjunct. Considering that they utilized small samples, were likely underpowered, and were feasibility studies, there would be benefit in replicating the studies with larger samples. Considering that approximately one-third of individuals appear less responsive to traditional approaches (Kessler et al., 1995), larger samples are needed to demonstrate reliable change.

Of the six CBI studies, only two did not demonstrate significant reductions in PTSD, although they did demonstrate increases in self-compassion and decreases in trauma-related guilt. It is possible that they may have failed to demonstrate change as they were the shortest interventions, lasting only four sessions. Correspondingly, as much research emphasizes the importance of the therapeutic relationship (Figley, 2002; Raab, 2014), shorter (Held et al., 2018) or workbook-based interventions (Held & Owens, 2015) may miss this proven active ingredient. In addition, trauma-related cognitions, behaviours, and symptoms can be challenging to change. Notably, all interventions except one (Lang et al., 2017) resulted in increased self-compassion.

Overall, a large portion of the studies utilized college or general population samples, which can be problematic when generalizing findings (Hanel & Vione, 2016). As many studies used a self-selected volunteer sample, it is possible that those trauma survivors who chose to participate differed from those who declined, as regards current symptomology. It is also possible that the decision to participate and subsequent participation in a study or intervention focused on trauma symptoms is an act of compassion in itself (Allen & Leary, 2010; Neff, Hsieh, & Dejitterat, 2005). Increased self-compassion is associated with greater help-seeking behaviour in recovery (Gilbert, 2009a; Gumley, Braehler, Laithwaite, MacBeth, & Gilbert, 2010). Volunteering may also be related to less avoidance and greater willingness to acknowledge the traumatic experience (Freyd, 2012). This could suggest that the sampling involved in the studies unintentionally selected individuals who were more open to change. Future research should aim to extend this research with survivors from demographically diverse backgrounds and through random sampling in mental health services. This will better inform the nature of the association between these constructs of interest. In addition, the inclusion of waitlisted controls as utilized in the alternative intervention with a therapeutic dog ownership and training programme (Bergen-Cico et al., 2018) would improve experimental rigour. Notably, this intervention was found to reduce PTSD symptoms and increase self-compassion compared with waitlisted controls. This intervention highlights the multifaceted nature of developing self-compassion and its impact on PTSD. It is also worth considering the literature on the associations between self-compassion and greater well-being (MacBeth & Gumley, 2012), as it is possible that increasing self-compassion may be helpful in promoting well-being and reducing residual transdiagnostic symptoms such as shame or guilt that are often reported as remaining following traditional treatment for PTSD (Lee et al., 2001). These may be targeted in interventions focused on increasing self-compassion. In addition, prior research suggests that self-compassion is associated with improvements in social connectedness (Neff & Germer, 2013) and relationship functioning (Neff & Beretvas, 2013), both protective factors for PTSD.

4.1 | Limitations and strengths

There were a number of limitations to this current systematic review. The reviewed papers have diverse samples in terms of time since diagnosis/trauma, type of trauma, diagnosis of PTSD, and recruitment. Reported demographic information varied considerably with few studies reporting time since trauma and number of traumas experienced. Furthermore, there were variations in current level of PTSD symptomatology endorsed by participants and in diagnostic criteria and measures used; some of the participants in identified cross-sectional studies may not reach the level of severity necessitating presentation to an adult mental health service. Many studies did not specify a specific trauma type or refer to differing trauma groups in analysis that may complicate findings as previous literature indicated that different traumas may lead to different sequelae (Breslau et al., 1998). In addition, a notable limitation is that the majority of the studies were cross sectional; thus, no assumptions about causality of the effects can be made until more prospective studies are conducted. Population-based

studies could potentially inform the self-compassion literature regarding possible fluctuations over time and in relation life experiences. Regarding intervention studies, some limitations were that observed symptom change is often based on self-report measures and not the gold standard clinician administered tools and they often lacked randomization and true control groups (i.e., waitlisted controls). Without a control, it is extremely difficult to determine whether results are due to receiving one of the interventions or whether changes are the result of time or other variables. Ultimately, expanding on these feasibility studies by increasing sample sizes and taking a gold standard RCT approach is essential to further validate effectiveness of compassion-based interventions. Ideally, larger sample sizes in combination with clear reporting of trauma histories and symptoms experienced could lead to a clearer understanding of which elements of compassion-based therapies are the most effective, why, and for whom.

A number of strengths are present in this systematic review. As far as the authors are aware, this is the first systematic review of self-compassion in adults who have experienced trauma and/or are experiencing PTSD symptoms. PRISMA-P guidelines were followed, and good inter-rater reliability ratings were established between both reviewers. All included studies were peer-reviewed and published to ensure an adequate level of quality and scientific rigour; however, as a result, there is a risk of publication bias as published articles are more likely to present positive results. A large number of databases were included in the search yielding a large range of papers. A broad search strategy was employed, which highlighted the variability in the measurement of PTSD and trauma and in contrast the existence of two self-compassion-related measures. This consistency could be considered a strength of the literature; however, further clarification of the construct of self-compassion would help demonstrate that research is measuring what it intends.

5 | CONCLUSIONS

Research has acknowledged the positive relationship between self-compassion and mental health, along with encouraging results from self-compassion interventions (Gilbert, 2014a; MacBeth & Gumley, 2012; Neff, 2003; Warren, Smeets, & Neff, 2016). This review highlights some key findings from studies that have examined self-compassion in trauma-exposed populations; however, the heterogeneity of studies and findings indicate that much more research is needed to build on preliminary evidence identified. Broadly, findings of this systematic review suggest that increased self-compassion is associated with a reduction in PTSD symptomatology in a diverse range of clinical and community populations. Despite the methodological limitations of the studies presented in this review, there is evidence to suggest that self-compassion may attenuate PTSD symptomatology and reduce the impact of trauma exposure. Intervention studies included in the review also found promising support in reduced PTSD symptoms following a group-based intervention utilizing compassion-based models and CBT interventions with a compassion-focused adjunct. Future research would help to validate these findings through repeated studies with non-trauma-exposed control groups for observational studies and waitlisted control groups for experimental studies. Also, although findings are positive for the association between increased self-compassion and reduced PTSD symptoms, the precise mechanism of these protective effects is unknown. Prospective and longitudinal studies would be beneficial in clarifying this. The review also highlighted the variability in what is and should be referred to as trauma exposure. Additional research is necessary to design appropriate measures to capture the complexity of trauma exposure, including trauma type, duration, frequency, life stage, and multiple types. Findings of intervention studies are promising and indicate that self-compassion may be an agent of change in PTSD symptom reduction and also in the reduction of trauma-related guilt and shame.

ACKNOWLEDGEMENTS

This research project was supported by HSE-South clinical psychology training sponsorships to S.-J. W. and O. M.

CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

ORCID

Sarah-Jane Winders https://orcid.org/0000-0001-6723-1039

ENDNOTE

*Note: References marked with an * were included in the systematic literature review.

REFERENCES*

Allen, A. B., & Leary, M. R. (2010). Self-compassion, stress, and coping. *Social and Personality Psychology Compass*, *4*(2), 107–118. https://doi.org/10.1111/j.1751-9004.2009.00246.x

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5). *Arlington*. https://doi.org/10.1176/appi.books.9780890425596.744053

Andrews, B., Brewin, C. R., Philpott, R., & Stewart, L. (2007). Delayed-onset posttraumatic stress disorder: A systematic review of the evidence. *American Journal of Psychiatry*, *164*(9), 1319–1326. https://doi.org/10.1176/appi.ajp.2007.06091491

Antonovsky, A. (1979). *Health, stress, and coping*. San Francisco: Jossey-Bass.

Aspy, D. J., & Proeve, M. (2017). Mindfulness and loving-kindness meditation: Effects on connectedness to humanity and to the natural world. *Psychological Reports*, *120*(1), 102–117. https://doi.org/10.1177/0033294116685867

Au, T. M. (2016). Developing and evaluating a compassion-based therapy for trauma-related shame and posttraumatic stress. In *Dissertation Abstracts International: Section B: The Sciences and Engineering*. Boston University. Retrieved from. https://ucd.idm.oclc.org/login?url=https://search.proquest.com/docview/1832254060?accountid=14507

Au, T. M., Sauer-Zavala, S., King, M. W., Petrocchi, N., Barlow, D. H., & Litz, B. T. (2017). Compassion-based therapy for trauma-related shame and posttraumatic stress: Initial evaluation using a multiple baseline design. *Behavior Therapy*, *48*(2), 207–221. https://doi.org/10.1016/j.beth.2016.11.012

Badour, C. L., & Feldner, M. T. (2013). Trauma-related reactivity and regulation of emotion: Associations with posttraumatic stress symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, *44*(1), 69–76. https://doi.org/10.1016/j.jbtep.2012.07.007

Baer, R. A., Lykins, E. L., & Peters, J. R. (2012). Mindfulness and self-compassion as predictors of psychological wellbeing in long-term meditators and matched nonmeditators. *The Journal of Positive Psychology*, *7*(3), 230–238. https://doi.org/10.1080/17439760.2012.674548

Barlow, M. R. R., Goldsmith Turow, R. E. R. E., & Gerhart, J. (2017). Trauma appraisals, emotion regulation difficulties, and self-compassion predict posttraumatic stress symptoms following childhood abuse. *Child Abuse & Neglect*, *65*, 37–47. https://doi.org/10.1016/j.chiabu.2017.01.006

Baumeister, R. F. (1991). *Meanings of life*. New York, NY: Guilford Press.

Beaumont, E., Durkin, M., Hollins-Martin, C. J., & Carson, J. (2016). Measuring relationships between self-compassion, compassion fatigue, burnout and well-being in student counsellors and student cognitive behavioural psychotherapists: A quantitative survey. *Counselling and Psychotherapy Research*, *16*(1), 15–23. https://doi.org/10.1002/capr.12054

*Beaumont, E., Durkin, M., McAndrew, S., & Martin, C. R. (2016). Using compassion focused therapy as an adjunct to trauma-focused CBT for fire service personnel suffering with trauma-related symptoms. *The Cognitive Behaviour Therapist*, *9*, 13. https://doi.org/10.1017/S1754470X16000209

*Beaumont, E., Galpin, A., & Jenkins, P. (2012). "Being kinder to myself": A prospective comparative study, exploring post-trauma therapy outcome measures, for two groups of clients, receiving either cognitive behaviour therapy or cognitive behaviour therapy and compassionate mind training. *Counselling Psychology Review*, *27*(1), 31–43. Retrieved from https://ucd.idm.oclc.org/login?url=https://search.proquest.com/docview/1018473876?accountid=14507

Beaumont, E., Hollins-Martin, C. J., & Hollins-Martin, C. J. (2015). A narrative review exploring the effectiveness of compassion-focused therapy. *Counselling Psychology Review*, *30*(1), 21–32. Retrieved from. https://ucd.idm.oclc.org/login?url=https://search.proquest.com/docview/1687042928?accountid=14507

Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., … Koenen, K. C. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine*, *46*(2), 327–343. https://doi.org/10.1017/S0033291715001981

Bensimon, M. (2017). Victimization in light of self-compassion: Development towards communal compassion. *Aggression and Violent Behavior*, *35*(June), 44–51. https://doi.org/10.1016/j.avb.2017.06.002

*Bergen-Cico, D., Smith, Y., Wolford, K., Gooley, C., Hannon, K., Woodruff, R., Spicer M. Gump, B. (2018). Dog ownership and training reduces post-traumatic stress symptoms and increases self-compassion among veterans: Results of a longitudinal control study. *Journal of Alternative and Complementary Medicine*, *24*(12), 1166–1175. https://doi.org/10.1089/acm.2018.0179

Bernstein, D. P., & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report manual*. San Antonio, TX: The Psychological Corporation.

Biber, D. D., & Ellis, R. (2017). The effect of self-compassion on the self-regulation of health behaviors: A systematic review. *Journal of Health Psychology*, *24*(14), 2060–2071. https://doi.org/10.1177/1359105317713361

*Bistricky, S. L., Gallagher, M. W., Roberts, C. M., Ferris, L., Gonzalez, A. J., & Wetterneck, C. T. (2017). Frequency of interpersonal trauma types, avoidant attachment, self-compassion, and interpersonal competence: A model of persisting posttraumatic symptoms. *Journal of Aggression, Maltreatment and Trauma*, *26*(6), 608–625. https://doi.org/10.1080/10926771.2017.1322657

Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S., & Keane, T. M. (1995). The development of a Clinician-Administered PTSD Scale. *Journal of Traumatic Stress*, *8*(1), 75–90. https://doi.org/10.1007/BF02105408

Boals, A. (2018). Trauma in the eye of the beholder: Objective and subjective definitions of trauma. *Journal of Psychotherapy Integration*, *28*(1), 77–89. https://doi.org/10.1037/int0000050

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American psychologist*, *59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Bonanno, G. A., & Mancini, A. D. (2012). Beyond resilience and PTSD: Mapping the heterogeneity of responses to potential trauma. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*(1), 74–83. https://doi.org/10.1037/a0017829

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology*, *75*(5), 671–682. https://doi.org/10.1037/0022-006X.75.5.671

Bonanno, G. A., Rennicke, C., & Dekel, S. (2005). Self-Enhancement Among High-Exposure Survivors of the September 11th Terrorist Attack: Resilience or Social Maladjustment? *Journal of Personality and Social Psychology*, *88*(6), 984–998. https://doi.org/10.1037/0022-3514.88.6.984

Bower, J. E., Kemeny, M. E., Taylor, S. E., & Fahey, J. L. (1998). Cognitive processing, discovery of meaning, CD4 decline, and AIDS-related mortality among bereaved HIV-seropositive men. *Journal of Consulting and Clinical Psychology*, *66*(6), 979–986. https://doi.org/10.1037/0022-006X.66.6.979

*Boykin, D. M., Himmerich, S. J., Pinciotti, C. M., Miller, L. M., Miron, L. R., & Orcutt, H. K. (2018). Barriers to self-compassion for female survivors of childhood maltreatment: The roles of fear of self-compassion and psychological inflexibility. *Child Abuse and Neglect*, *76* (February 2017), 216–224. https://doi.org/10.1016/j.chiabu.2017.11.003

Breslau, N., Kessler, R., Chilcoat, H., Schultz, L., Davis, G., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, *55*(7), 626–632. Retrieved from. https://doi.org/10.1001/archpsyc.55.7.626

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*. US: American Psychological Association, *68*, 748–766. https://doi.org/10.1037/0022-006X.68.5.748

Brewin, C. R., Gregory, J. D., Lipton, M., & Burgess, N. (2010). Intrusive images in psychological disorders: Characteristics, neural mechanisms, and treatment implications. *Psychological Review*, *117*(1), 210–232. https://doi.org/10.1037/a0018113

Brewin, C. R., & Joseph, S. (1996). A dual representation theory of post-traumatic stress disorder. *Psychological Review*, *103*(4), 670–686. https://doi.org/10.1037//0033-295x.103.4.670

Briere, J., Elliott, D. M., Harris, K., & Cotman, A. (1995). Trauma symptom inventory: Psychometrics and association with childhood and adult victimization in clinical samples. *Journal of Interpersonal Violence*, *10*(4), 387–401. https://doi.org/10.1177/088626095010004001

Briere, J., Kaltman, S., & Green, B. L. (2008). Accumulated childhood trauma and symptom complexity. *Journal of Traumatic Stress*, *21*(2), 223–226. https://doi.org/10.1002/jts.20317

Briere, J., & Runtz, M. (1990). Differential adult symptomatology associated with three types of child abuse histories. *Child Abuse & Neglect*, *14*(3), 357–364. https://doi.org/10.1016/0145-2134(90)90007-G

Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *13*(3), 521–527. https://doi.org/10.1023/a:1007745627077

Caramanica, K., Brackbill, R. M., Stellman, S. D., & Farfel, M. R. (2015). Posttraumatic Stress disorder after hurricane sandy among persons exposed to the 9/11 disaster. *International Journal of Emergency Mental Health*, *17*(1), 356–362. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25960693, DOI: https://doi.org/10.4172/1522-4821.1000173

Carlson, E. B., Smith, S. R., Palmieri, P. A., Dalenberg, C., Ruzek, J. I., Kimerling, R., … Spain, D. A. (2011). Development and validation of a brief self-report measure of trauma exposure: The Trauma History Screen. *Psychological Assessment*, *23*(2), 463–477. https://doi.org/10.1037/a0022294

Cloitre, M., Garvert, D. W., Brewin, C. R., Bryant, R. A., & Maercker, A. (2013). Evidence for proposed ICD-11 PTSD and complex PTSD: A latent profile analysis. *European Journal of Psychotraumatology*, *4*(1), 20706. https://doi.org/10.3402/ejpt.v4i0.20706

Cloitre, M., Garvert, D. W., Weiss, B., Carlson, E. B., & Bryant, R. A. (2014). Distinguishing PTSD, complex PTSD, and borderline personality disorder: A latent class analysis. *European Journal of Psychotraumatology*, *5*, 1–10. https://doi.org/10.3402/ejpt.v5.25097

Cromer, L. D., & Smyth, J. M. (2010). Making meaning of trauma: Trauma exposure doesn't tell the whole story. *Journal of Contemporary Psychotherapy*, *40*(2), 65–72. https://doi.org/10.1007/s10879-009-9130-8

*Dahm, K. A., Meyer, E. C., Neff, K. D., Kimbrel, N. A., Gulliver, S. B., & Morissette, S. B. (2015). Mindfulness, self-compassion, posttraumatic stress disorder symptoms, and functional disability in U.S. Iraq and Afghanistan war veterans. *Journal of Traumatic Stress*, *28*(5), 460–464. https://doi.org/10.1002/jts.22045

Davidson, J. R. T., Book, S. W., Colket, J. T., Tupler, L. A., Roth, S., David, D., … Feldman, M. E. (1997). Assessment ofa new self-rating scale for post-traumatic stress disorder. *Psychological Medicine*, *27*(1), 153–160. https://doi.org/10.1017/s0033291796004229

DePrince, A. P., Chu, A. T., & Pineda, A. S. (2011). Links between specific posttrauma appraisals and three forms of trauma-related distress. *Psychological trauma: Theory, research, practice, and policy*. DePrince, Anne P.: Department of Psychology, University of Denver, 2155 South Race Street, Denver, CO, US, 80208, adeprinc@du.edu: Educational Publishing Foundation. https://doi.org/10.1037/a0021576

deRoon-Cassini, T. A., Mancini, A. D., Rusch, M. D., & Bonanno, G. A. (2010). Psychopathology and resilience following traumatic injury: A latent growth mixture model analysis. *Rehabilitation Psychology*, *55*(1), 1–11. https://doi.org/10.1037/a0018601

Doctor, J. N., Zoellner, L. A., & Feeny, N. C. (2011). Predictors of Health-related quality-of-life utilities among persons with posttraumatic stress disorder. *Psychiatric Services*, *62*(3), 272–277. https://doi.org/10.1176/ps.62.3.pss6203_0272

Downs, S. H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiology & Community Health*, *52*(6), 377–384. https://doi.org/10.1136/jech.52.6.377

Ehlers, A. (2010). Understanding and treating unwanted trauma memories in posttraumatic stress disorder. *Zeitschrift Fur Psychologie*, *218*(2), 141–145. https://doi.org/10.1027/0044-3409/a000021

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behavior Research and Therapy*, *38*, 319–345. https://doi.org/10.1016/S0005-7967(99)00123-0

Elliott, D. M., & Briere, J. (1992). Sexual abuse trauma among professional women: Validating the Trauma Symptom Checklist-40 (TSC-40). *Child Abuse & Neglect*, *16*(3), 391–398. https://doi.org/10.1016/0145-2134(92)90048-V

Engelhard, I. M., Van Den Hout, M. A., Weerts, J., Arntz, A., Hox, J. J. C. M., & McNally, R. J. (2007). Deployment-related stress and trauma in Dutch soldiers returning from Iraq: Prospective study. *British Journal of Psychiatry*, *191*(2), 140–145. https://doi.org/10.1192/bjp.bp.106.034884

Enlow, M. B., Blood, E., & Egeland, B. (2013). Sociodemographic risk, developmental competence, and PTSD symptoms in young children exposed to interpersonal trauma in early life. *Journal of Traumatic Stress*, *26*(6), 686–694. Retrieved from. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4157899/

Feliu-Soler, A., Pascual, J. C., Elices, M., Martín-Blanco, A., Carmona, C., Cebolla, A., … Soler, J. (2017). Fostering self-compassion and loving-kindness in patients with borderline personality disorder: A randomized pilot study. *Clinical Psychology and Psychotherapy*, *24*(1), 278–286. https://doi.org/10.1002/cpp.2000

Figley, C. R. (2002). Compassion fatigue: Psychotherapists' chronic lack of self care. *Journal of Clinical Psychology*, *58*(11), 1433–1441. https://doi.org/10.1002/jclp.10090

Finkelhor, D., Shattuck, A., Turner, H. A., & Hamby, S. L. (2014). The lifetime prevalence of child sexual abuse and sexual assault assessed in late adolescence. *Journal of Adolescent Health*, *55*(3), 329–333. https://doi.org/10.1016/j.jadohealth.2013.12.026

Finlay-Jones, A. L. (2017). The relevance of self-compassion as an intervention target in mood and anxiety disorders: A narrative review based on an emotion regulation framework. *Clinical Psychologist*, *21*(2), 90–103. https://doi.org/10.1111/cp.12131

Finlay-Jones, A. L., Rees, C. S., & Kane, R. T. (2015). Self-Compassion, emotion regulation and stress among Australian psychologists: Testing an emotion regulation model of self-compassion using structural equation modeling. *PloS One*, *10*(7), e0133481. https://doi.org/10.1371/journal.pone.0133481

Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment*. US: American Psychological Association. https://doi.org/10.1037/1040-3590.9.4.445

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, *99*(1), 20–35. https://doi.org/10.1037/0033-2909.99.1.20

Foa, E. B., Riggs, D. S., Dancu, C. V, & Rothbaum, B. O. (1993). *Reliability and validity of a brief instrument for assessing post-traumatic stress disorder*. *Journal of Traumatic Stress*, 6(4), 459–473.

Foa, E. B., & Rothbaum, B. O. (1998). Treatment manuals for practitioners. Treating the trauma of rape: Cognitive-behavioral therapy for PTSD. New York.

Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder, 155–176. https://doi.org/10.1016/s0005-7894(89)80067-x

Follette, V. M., Polusny, M. A., Bechtle, A. E., & Naugle, A. E. (1996). Cumulative trauma: The impact of child sexual abuse, adult sexual assault, and spouse abuse. *Journal of Traumatic Stress*, *9*(1), 25–35. https://doi.org/10.1002/jts.2490090104

Fossion, P., Leys, C., Kempenaers, C., Braun, S., Verbanck, P., & Linkowski, P. (2015). Beware of multiple traumas in PTSD assessment: The role of reactivation mechanism in intrusive and hyper-arousal symptoms. *Aging & Mental Health*, *19*(3), 258–263. https://doi.org/10.1080/13607863.2014.924901

Freyd, J. J. (2012). A plea to university researchers. *Journal of Trauma & Dissociation*, *13*(5), 497–508. https://doi.org/10.1080/15299732.2012.708613

Friedman, M. J., Keane, T. M., & Resick, P. A. (Eds.) (2007). Handbook of PTSD: Science and practice. In *Handbook of PTSD: Science and Practice*. New York, NY, US: The Guilford Press.

Germer, C. K., & Neff, K. D. (2013). Self-compassion in clinical practice. *Journal of Clinical Psychology*, *69*(8), 856–867. https://doi.org/10.1002/jclp.22021

Germer, C. K., & Neff, K. D. (2015). Cultivating self-compassion in trauma survivors. *Mindfulness Oriented Interventions to Trauma: Integrating Contemplative Practices*, 43–58. Retrieved from https://ucd.idm.oclc.org/login?url=https://search.proquest.com/docview/1674698414?accountid=14507

Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. New York, NY: Routledge.

Gilbert, P. (2009a). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199–208. https://doi.org/10.1192/apt.bp.107.005264

Gilbert, P. (2009b). The nature and basis for compassion focused therapy. pdf. *Hellenic Journal of Psychology*, *6*(20), 273–291.

Gilbert, P. (2014a). Compassion-focused therapy: Preface and introduction for special section. *British Journal of Clinical Psychology*, *53*(1), 1–5. https://doi.org/10.1111/bjc.12045

Gilbert, P. (2014b). The origins and nature of compassion focused therapy. *BRITISH JOURNAL OF CLINICAL PSYCHOLOGY*, *53*(1), 6–41. https://doi.org/10.1111/bjc.12043

Gilbert, P. (2018). Explorations into the nature and function of compassion. *Current Opinion in Psychology*, *28*, 108–114. https://doi.org/10.1016/j.copsyc.2018.12.002

Gilbert, P., & Irons, C. (2005). Focused therapies and compassionate mind training for shame and self-attacking. *Compassion: Conceptualisations, Research and Use in Psychotherapy*, 263–325. London: Brunner-Routledge.

Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy*, *84*(3), 239–255. https://doi.org/10.1348/147608310X526511

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, *13*(6), 353–379. https://doi.org/10.1002/cpp.507

Goenjian, A. K., Roussos, A., Steinberg, A. M., Sotiropoulou, C., Walling, D., Kakaki, M., & Karagianni, S. (2011). Longitudinal study of PTSD, depression, and quality of life among adolescents after the Parnitha earthquake. *Journal of Affective Disorders*, *133*(3), 509–515. https://doi.org/10.1016/j.jad.2011.04.053

Gold, P. B., Engdahl, B. E., Eberly, R. E., Blake, R. J., Page, W. F., & Frueh, B. C. (2000). Trauma exposure, resilience, social support, and PTSD construct validity among former prisoners of war. *Social Psychiatry and Psychiatric Epidemiology*, *35*(1), 36–42. https://doi.org/10.1007/s001270050006

Goodman, L. A., Corcoran, C., Turner, K., Yuan, N., & Green, B. L. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful Life Events Screening Questionnaire. *Journal of Traumatic Stress*, *11*(3), 521–542. https://doi.org/10.1023/A:1024456713321

Graham-Bermann, S. A., Gruber, G., Howell, K. H., & Girz, L. (2009). Factors discriminating among profiles of resilience and psychopathology in children exposed to intimate partner violence (IPV). *Child Abuse & Neglect*, *33*(9), 648–660. https://doi.org/10.1016/j.chiabu.2009.01.002

Green, B. L. (1996). Psychometric review of the Trauma History Questionnaire. In B. H. Stamm (Ed.), *Measurement of stress, trauma, and adaptation* (pp. 366–369). Brooklandville, MD: Sidran Press.

Grubaugh, A. L., Zinzow, H. M., Paul, L., Egede, L. E., & Frueh, B. C. (2011). Trauma exposure and posttraumatic stress disorder in adults with severe mental illness: A critical review. *Clinical Psychology Review*, *31*(6), 883–899. https://doi.org/10.1016/j.cpr.2011.04.003

Gumley, A., Braehler, C., Laithwaite, H., MacBeth, A., & Gilbert, P. (2010). A compassion focused model of recovery after psychosis. *International Journal of Cognitive Therapy*, *3*(2), 186–201. https://doi.org/10.1521/ijct.2010.3.2.186

Gutner, C. A., Galovski, T., Bovin, M. J., & Schnurr, P. P. (2016). Emergence of transdiagnostic treatments for PTSD and posttraumatic distress. *Current Psychiatry Reports*, *18*(10), 95. https://doi.org/10.1007/s11920-016-0734-x

*Hamrick, L., & Owens, G. P. (2018). Exploring the mediating role of self-blame and coping in the relationships between self-compassion and distress in women following sexual assault. *Journal of Clinical Psychology*, (September), 1–14. https://doi.org/10.1002/jclp.22730

Hanel, P. H. P., & Vione, K. C. (2016). Do student samples provide an accurate estimate of the general public? *PloS One*, *11*(12), , e0168354. c

Harvard Medical School. (2007). National Comorbidity Survey (NCS). Retrieved from https://www.hcp.med.harvard.edu/ncs/index.php

Harvey, M. R. (1996). An ecological view of psychological trauma and trauma recovery. *Journal of Traumatic Stress*, *9*(1), 3–23. https://doi.org/10.1002/jts.2490090103

Haslam, N. (2016). Concept creep: Psychology's expanding concepts of harm and pathology. *Psychological Inquiry*, *27*(1), 1–17. https://doi.org/10.1080/1047840X.2016.1082418

*Hawkins, L., Centifanti, L. C. M., Holman, N., & Taylor, P. (2018). Parental adjustment following pediatric burn injury: The role of guilt, shame, and self-compassion. *Journal of Pediatric Psychology*, 1–9. https://doi.org/10.1093/jpepsy/jsy079, *44*

*Held, P., & Owens, G. P. (2015). Effects of self-compassion workbook training on trauma-related guilt in a sample of homeless veterans: A pilot study. *Journal of Clinical Psychology*, *71*(6), 513–526. https://doi.org/10.1002/jclp.22170

*Held, P., Owens, G. P., Thomas, E. A., White, B. A., & Anderson, S. E. (2018). A pilot study of brief self-compassion training with individuals in substance use disorder treatment. *Traumatology*, *24*(3), 219–227. https://doi.org/10.1037/trm0000146

Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, *5*(3), 377–391. https://doi.org/10.1002/jts.2490050305

*Hiraoka, R., Meyer, E. C., Kimbrel, N. A., DeBeer, B. B., Gulliver, S. B., & Morissette, S. B. (2015). Self-compassion as a prospective predictor of PTSD symptom severity among trauma-exposed U.S. Iraq and Afghanistan War veterans. *Journal of Traumatic Stress*, *28*(2), 127–133. https://doi.org/10.1002/jts.21995

*Hoffart, A., Oktedalen, T., & Langkaas, T. F. (2015). Self-compassion influences PTSD symptoms in the process of change in trauma-focused cognitive-behavioral therapies: A study of within-person processes. *Frontiers in Psychology*, *6*, 1273. https://doi.org/10.3389/fpsyg.2015.01273

Hoge, C. W., & Chard, K. M. (2018). A window into the evolution of trauma-focused psychotherapies for posttraumatic stress disorder. *JAMA*, *319*(4), 343–345. https://doi.org/10.1001/jama.2017.21880

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine*, *41*(3), 209–218. https://doi.org/10.1097/00006842-197905000-00004

Huang, L., Flatow, R., Biggs, T., Afayee, S., Smith, K., Clark, T., & Blake, M. (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach. *HHS Publication* (Vol. 14–4884). Rockville, MD. Retrieved from https://store.samhsa.gov/system/files/sma14-4884.pdf

Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. *Emotion*. Gross, James J.: Department of Psychology, Stanford University, Jordan Hall, Bldg. 420, Stanford, CA, US, 94305-2130, gross@stanford.edu: American Psychological Association. https://doi.org/10.1037/a0013237

Hyland, P., Murphy, J., Shevlin, M., Vallières, F., McElroy, E., Elklit, A., … Cloitre, M. (2017). Variation in post-traumatic response: The role

of trauma type in predicting ICD-11 PTSD and CPTSD symptoms. In *Social psychiatry and psychiatric epidemiology: The international journal for research in social and genetic epidemiology and mental health services*. Mayor Street, Dublin 1, Ireland: Hyland, Philip: School of Business, National College of Ireland, IFSC. philip.hyland@ncirl.ie: Springer

Imel, Z. E., Laska, K., Jakupcak, M., & Simpson, T. L. (2013). Meta-analysis of dropout in treatments for posttraumatic stress disorder. *J. Consult. Clin. Psychol.*, *81*, 394–404. https://doi.org/10.1037/a0031474

Jakob, J. M., Lamp, K., Rauch, S. A., Smith, E. R., & Buchholz, K. R. (2017). The impact of trauma type or number of traumatic events on PTSD diagnosis and symptom severity in treatment seeking veterans. *The Journal of nervous and mental disease*, *205*(2), 83–86. https://doi.org/10.1097/NMD.0000000000000581

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, *7*(2), 113–136. https://doi.org/10.1521/soco.1989.7.2.113

Janoff-Bulman, R., & McPherson Frantz, C. (1997). The impact of trauma on meaning: From meaningless world to meaningful life. In M. Power, & C. Brewin (Eds.), *The transformation of meaning in psychological therapies: Integrating theory and practice* (pp. 91–106). Sussex, England: John Wiley & Sons Inc.

Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage EGO-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology*, *32*(9), 939–963. https://doi.org/10.1521/jscp.2013.32.9.939

Jonas, D. E., Cusack, K., Forneris, C. A., Wilkins, T. M., Sonis, J., Middleton, J. C., et al. (2013). Psychological and pharmacological treatments for adults with posttraumatic stress disorder (PTSD): Comparative effectiveness review no. 92. (Prepared by the RTI International-University of North Carolina Evidence-Based Practice Center Under Contract No. 290-2007-10056-I). AHRQ Publication No. 13-EHC011-EF. Rockville, MD: Agency for Healthcare Research and Quality.

Karam, E. G., Friedman, M. J., Hill, E. D., Kessler, R. C., McLaughlin, K. A., Petukhova, M., … Koenen, K. C. (2014). Cumulative traumas and risk thresholds: 12-month PTSD in the World Mental Health (WMH) surveys. *Depression and Anxiety*, *31*(2), 130–142. https://doi.org/10.1002/da.22169

Karatzias, T., Hyland, P., Bradley, A., Fyvie, C., Logan, K., Easton, P., … Shevlin, M. (2018). Is self-compassion a worthwhile therapeutic target for ICD-11 complex PTSD (CPTSD)? *Behavioural and Cognitive Psychotherapy*, *47*, 1–13. https://doi.org/10.1017/S1352465818000577

Kaysen, D., Rosen, G., Bowman, M., & Resick, P. A. (2009). Duration of exposure and the dose-response model of PTSD. *Journal of Interpersonal Violence*, *25*(1), 63–74. https://doi.org/10.1177/0886260508329131

*Kearney, D. J., McManus, C., Martinez, M. E., Felleman, B., & Simpson, T. L. (2013). Loving-kindness meditation for posttraumatic stress disorder: A pilot study. *Journal of Traumatic Stress*, *26*(4), 426–434. https://doi.org/10.1002/jts.21832

Keene, A. C., & Epps, J. (2016). Childhood physical abuse and aggression: Shame and narcissistic vulnerability. *Child Abuse & Neglect*, *51*, 276–283. https://doi.org/10.1016/j.chiabu.2015.09.012

Kessler, R. C. (2000). Posttraumatic stress disorder: The burden to the individual and to society. *The Journal of Clinical Psychiatry*. US: Physicians Postgraduate Press.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*(6), 593. https://doi.org/10.1001/archpsyc.62.6.593

Kessler, R. C., Sonnega, A., Nelson, C. B., & Bromet, E. (1995). Post-traumatic stress disorder in the national comorbidity survey. *Arch Gen Psychiatry*, *52*(Dec 1995), 1048–1060.

Keyes, K. M., McLaughlin, K. A., Koenen, K. C., Goldmann, E., Uddin, M., & Galea, S. (2012). Child maltreatment increases sensitivity to adverse social contexts: Neighborhood physical disorder and incident binge drinking in Detroit. *Drug and Alcohol Dependence*, *122*(1–2), 77–85. https://doi.org/10.1016/j.drugalcdep.2011.09.013

Kilpatrick, D. G., Resnick, H. S., Milanak, M. E., Miller, M. W., Keyes, M. K., & Friedman, M. J. (2013). Prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress*, *26*(5), 537–547. https://doi.org/10.1002/jts.21848.National

Kira, I. A. (2001). Taxonomy of trauma and trauma assessment. *Traumatology*, *7*(2), 73–86. https://doi.org/10.1177/153476560100700202

Kira, I. A. (2010). Etiology and treatment of post-cumulative traumatic stress disorders in different cultures. *Traumatology*, *16*(4), 128–141. https://doi.org/10.1177/1534765610365914

Kira, I. A., Lewandowski, L., Templin, T., Ramaswamy, V., Ozkan, B., & Mohanesh, J. (2008). Measuring cumulative trauma dose, types, and profiles using a development-based taxonomy of traumas. *Traumatology*, *14*(2), 62–87. https://doi.org/10.1177/1534765608319324

Kira, I. A., Templin, T., Lewandowski, L., Ramaswamy, V., Ozkan, B., Abou-Mediane, S., … Alamia, H. (2011). Cumulative tertiary appraisals of traumatic events across cultures: Two studies. *Journal of Loss and Trauma*, *16*(1), 43–66. https://doi.org/10.1080/15325024.2010.519288

Krieger, T., Berger, T., & Holtforth, M. G. (2016). The relationship of self-compassion and depression: Cross-lagged panel analyses in depressed patients after outpatient therapy. *Journal of Affective Disorders*, *202*, 39–45. https://doi.org/10.1016/j.jad.2016.05.032

Kross, E., & Ayduk, O. (2011). Making meaning out of negative experiences by self-distancing. *Current Directions in Psychological Science*, *20*(3), 187–191. https://doi.org/10.1177/0963721411408883

Krupnik, V. (2018). Trauma or adversity ? *Traumatology.*, *25*, 256–261. https://doi.org/10.1037/trm0000169

Kubany, E. S., Leisen, M. B., Kaplan, A. S., Watson, S. B., Haynes, S. N., Owens, J. A., & Burns, K. (2000). Development and preliminary validation of a brief broad-spectrum measure of trauma exposure: The Traumatic Life Events Questionnaire. In *Psychological Assessment* (Vol. 12) (pp. 210–224). US: American Psychological Association. https://doi.org/10.1037/1040-3590.12.2.210

*Lang, A. J., Casmar, P., Hurst, S., Harrison, T., Golshan, S., Good, R., Essex M. Negi, L. (2017). Compassion meditation for veterans with posttraumatic stress disorder (PTSD): A nonrandomized study. *Mindfulness*. https://doi.org/10.1007/s12671-017-0866-z, *11*, 63, 74

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, *92*(5), 887–904. https://doi.org/10.1037/0022-3514.92.5.887

Lee, D. A., Scragg, P., & Turner, S. (2001). The role of shame and guilt in traumatic events: A clinical model of shame-based and guilt-based PTSD. *British Journal of Medical Psychology*, *74*(4), 451–466. https://doi.org/10.1348/000711201161109

*Lenferink, L. I. M., Eisma, M. C., de Keijser, J., & Boelen, P. A. (2017). Grief rumination mediates the association between self-compassion and psychopathology in relatives of missing persons. *European Journal of Psychotraumatology*, *8*(sup6), 1378052. https://doi.org/10.1080/20008198.2017.1378052

Lopez, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., … Schroevers, M. J. (2015). A reconsideration of the self-compassion scale's total score: Self-compassion versus self-criticism.

PLoS ONE, *10*(7), e0132940. https://doi.org/10.1371/journal.pone.0132940

Lowe, S. R., Walsh, K., Uddin, M., Galea, S., & Koenen, K. C. (2014). Bidirectional relationships between trauma exposure and posttraumatic stress: A longitudinal study of Detroit residents. *Journal of Abnormal Psychology*. Lowe, Sarah R.: Department of Epidemiology, Columbia University, Mailman School of Public Health, 722 West 168th Street, New York, NY, US, 10032, srl2143@columbia.edu: American Psychological Association. https://doi.org/10.1037/a0037046

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, *32*(6), 545–552. https://doi.org/10.1016/j.cpr.2012.06.003

*Maheux, A., & Price, M. (2015). Investigation of the relation between PTSD symptoms and self-compassion: Comparison across DSM IV and DSM 5 PTSD symptom clusters. *Self and Identity*, *14*(6), 627–637. https://doi.org/10.1080/15298868.2015.1037791

*Maheux, A., & Price, M. (2016). The indirect effect of social support on post-trauma psychopathology via self-compassion. *Personality and Individual Differences*, *88*, 102–107. https://doi.org/10.1016/j.paid.2015.08.051

Markowitz, J. C., Milrod, B., Bleiberg, K., & Marshall, R. D. (2009). Interpersonal factors in understanding and treating posttraumatic stress disorder. *Journal of Psychiatric Practice*, *15*(2), 133–140. https://doi.org/10.1097/01.pra.0000348366.34419.28

May, C. L., Wisco, B. E., May, C. L., & Wisco, B. E. (2015). Defining trauma: How level of exposure and proximity affect risk for posttraumatic stress. *Psychological Trauma: Theory, Research, Practice, and Policy*, *8*(2), 233–240. https://doi.org/10.1037/tra0000077

McAdams, D. P. (1993). *The stories we live by: personal myths and the making of the self*. New York, NY: Guilford Publications. Retrieved from. https://books.google.ie/books?id=2d0v6Y6JoxAC

McLaughlin, K. A., Conron, K. J., Koenen, K. C., & Gilman, S. E. (2010). Childhood adversity, adult stressful life events, and risk of past-year psychiatric disorder: A test of the stress sensitization hypothesis in a population-based sample of adults. *Psychological Medicine*, *40*(10), 1647–1658. https://doi.org/10.1017/S0033291709992121

*McLean, C. L., Fiorillo, D., & Follette, V. M. (2018). Self-compassion and psychological flexibility in a treatment-seeking sample of women survivors of interpersonal violence. *Violence and Victims*, *33*(3), 472–485. https://doi.org/10.1891/0886-6708.v33.i3.472

*Meyer, E. C., Frankfurt, S. B., Kimbrel, N. A., DeBeer, B. B., Gulliver, S. B., & Morrisette, S. B. (2018). The influence of mindfulness, self-compassion, psychological flexibility, and posttraumatic stress disorder on disability and quality of life over time in war veterans. *Journal of Clinical Psychology*, *74*(7), 1272–1280. https://doi.org/10.1002/jclp.22596

*Meyer, E. C., Szabo, Y. Z., Frankfurt, S. B., Kimbrel, N. A., Debeer, B. B., & Morissette, S. B. (2019). Predictors of recovery from post-deployment posttraumatic stress disorder symptoms in war veterans: The contributions of psychological flexibility, mindfulness, and self-compassion. *Behaviour Research and Therapy*, *114*(August 2018), 7–14. https://doi.org/10.1016/j.brat.2019.01.002

*Miron, L. R., Orcutt, H. K., Hannan, S. M., & Thompson, K. L. (2014). Childhood abuse and problematic alcohol use in college females: The role of self-compassion. *Self and Identity*, *13*(3), 364–379. https://doi.org/10.1080/15298868.2013.836131

*Miron, L. R., Seligowski, A. V., Boykin, D. M., & Orcutt, H. K. (2016). The potential indirect effect of childhood abuse on posttrauma pathology through self-compassion and fear of self-compassion. *Mindfulness*, *7*(3), 596–605. https://doi.org/10.1007/s12671-016-0493-0

*Miron, L. R., Sherrill, A. M., & Orcutt, H. K. (2015). Fear of self-compassion and psychological inflexibility interact to predict PTSD symptom severity. *Journal of Contextual Behavioral Science*, *4*(1), 37–41. https://doi.org/10.1016/j.jcbs.2014.10.003

Modesti, P. A., Reboldi, G., Cappuccio, F. P., Agyemang, C., Remuzzi, G., Rapi, S., … Settings, E. S. H. W. G. on C. V. R. in L. R (2016). Panethnic differences in blood pressure in Europe: A systematic review and meta-analysis. *PLOS ONE*, *11*(1), e0147601. Retrieved from. https://doi.org/10.1371/journal.pone.0147601

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Group, P., & David Moher, Alessandro Liberati; Jennifer Tetzlaff, D. G. A. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med*, *6*(7), e1000097. https://doi.org/10.7326/0003-4819-151-4-200908180-00135, 264, *9*, W64

Morris, D., & Gray, N. (2015). Increasing knowledge of personality disorders in detained women with an intellectual disability. *Journal of Intellectual Disabilities and Offending Behaviour*, *6*(1), 23–32. https://doi.org/10.1108/JIDOB-04-2015-0005

Mowrer, O. H. (1951). Two-factor learning theory: Summary and comment. *Psychological Review*, *58*(5), 350–354. https://doi.org/10.1037/h0058956

*Müller-Engelmann, M., Schreiber, C., Kümmerle, S., Heidenreich, T., Stangier, U., & Steil, R. (2018). A trauma-adapted mindfulness and loving-kindness intervention for patients with PTSD after interpersonal violence: A multiple-baseline study. *Mindfulness*, *28*, 1–19. https://doi.org/10.1007/s12671-018-1068-z

National Center for PTSD. (2014). Advancing science and promoting understanding of traumatic stress.

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D. (2016). The Self-Compassion Scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, *7*(1), 264–274. https://doi.org/10.1007/s12671-015-0479-3

Neff, K. D., & Beretvas, S. N. (2013). The role of self-compassion in romantic relationships. *Self and Identity*. Neff, Kristin D.: University of Texas at Austin, Educational Psychology Department, 1 University Station, D5800, Austin, TX, US, 78712, kristin.neff@mail.utexas.edu: Taylor & Francis. https://doi.org/10.1080/15298868.2011.639548

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful Self-compassion program. *Journal of Clinical Psychology*, *69*(1), 28–44. https://doi.org/10.1002/jclp.21923

Neff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity*. Neff, Kristin D.: Department of Educational Psychology, University of Texas, 1 University Station, D5800, Austin, TX, US, 78712, kristin.neff@mail.utexas.edu: Taylor & Francis. https://doi.org/10.1080/13576500444000317

Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, *41*(1), 139–154. https://doi.org/10.1016/j.jrp.2006.03.004

Obradović, J., van Dulmen, M. H. M., Yates, T. M., Carlson, E. A., & Egeland, B. (2006). Developmental assessment of competence from early childhood to middle adolescence. *Journal of Adolescence*, *29*(6), 857–889. https://doi.org/10.1016/j.adolescence.2006.04.009

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, *136*(2), 257–301. https://doi.org/10.1037/a0018301

Park, C. L. (2016). Meaning making in the context of disasters. *Journal of Clinical Psychology*, *72*(12), 1234–1246. https://doi.org/10.1002/jclp.22270

Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology*, *1*(2), 115–144. https://doi.org/10.1037/1089-2680.1.2.115

Park, C. L., Riley, K. E., & Snyder, L. B. (2012). Meaning making coping, making sense, and post-traumatic growth following the 9/11 terrorist attacks. *The Journal of Positive Psychology*, *7*(3), 198–207. https://doi.org/10.1093/schbul/sbm069

Pauley, G., & McPherson, S. (2010). The experience and meaning of compassion and self-compassion for individuals with depression or anxiety. *Psychology and Psychotherapy: Theory, Research and Practice*, *83*(2), 129–143. https://doi.org/10.1348/147608309X471000

Pinciotti, C. M., Seligowski, A. V., & Orcutt, H. K. (2017). Psychometric properties of the PACT Scale and relations with symptoms of PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy*, *9*(3), 362–369. https://doi.org/10.1037/tra0000206

Powers, A., Cross, D., Fani, N., & Bradley, B. (2015). PTSD, emotion dysregulation, and dissociative symptoms in a highly traumatized sample. *Journal of Psychiatric Research*, *61*, 174–179. https://doi.org/10.1016/j.jpsychires.2014.12.011

Powers, A., Fani, N., Carter, S., Cross, D., Cloitre, M., & Bradley, B. (2017). Differential predictors of DSM-5 PTSD and ICD-11 complex PTSD among African American women. *European Journal of Psychotraumatology*, *8*(1), 1338914. https://doi.org/10.1080/20008198.2017.1338914

Raab, K. (2014). Mindfulness, self-compassion, and empathy among health care professionals: A review of the literature. *Journal of Health Care Chaplaincy*, *20*(3), 95–108. https://doi.org/10.1080/08854726.2014.913876

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*, *18*, 250–255. https://doi.org/10.1002/cpp.702

*Reffi, A. N., Boykin, D. M., & Orcutt, H. K. (2018). Examining pathways of childhood maltreatment and emotional dysregulation using self-compassion. *Journal of Aggression, Maltreatment and Trauma*, *00*(00), 1–17. https://doi.org/10.1080/10926771.2018.1485810

Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, *61*(6), 984–991. https://doi.org/10.1037/0022-006X.61.6.984

Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N., & Koenen, K. C. (2010). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, *41*(1), 71–83. https://doi.org/10.1017/S0033291710000401

Rodriguez, P., Holowka, D. W., & Marx, B. P. (2012). Assessment of posttraumatic stress disorder-related functional impairment: A review. *Journal of Rehabilitation Research and Development*, *49*(5), 649–665. Retrieved from. http://europepmc.org/abstract/MED/23015577

Sanders, B., & Becker-Lausen, E. (1995). The measurement of psychological maltreatment: Early data on the Child Abuse and Trauma Scale. In *Child Abuse & Neglect*. Netherlands: Elsevier Science.

Schnurr, P. P., Spiro, A. III, Vielhauer, M. J., Findler, M. N., & Hamblen, J. L. (2002). Trauma in the Lives of Older Men: Findings from the Normative Aging Study. *Journal of Clinical Geropsychology*, *8*(3), 175–187. https://doi.org/10.1023/a:1015992110544

*Scoglio, A. A. J., Rudat, D. A., Garvert, D., Jarmolowski, M., Jackson, C., & Herman, J. L. (2018). Self-compassion and responses to trauma: The role of emotion regulation. *Journal of Interpersonal Violence*, *33*(13), 2016–2036. https://doi.org/10.1177/0886260515622296

Seligowski, A. V., Miron, L. R., & Orcutt, H. K. (2015). Relations among self-compassion, PTSD symptoms, and psychological health in a trauma-exposed sample. *Mindfulness*, *6*(5), 1033–1041. https://doi.org/10.1007/s12671-014-0351-x

Shakespeare-Finch, J., & Armstrong, D. (2010). Trauma type and post-trauma outcomes: Differences between survivors of motor vehicle accidents, sexual assault, and bereavement. *Journal of Loss and Trauma*, *15*(2), 69–82. https://doi.org/10.1080/15325020903373151

Shevlin, M., Houston, J. E., Dorahy, M. J., & Adamson, G. (2008). Cumulative traumas and psychosis: An analysis of the National Comorbidity Survey and the British Psychiatric Morbidity Survey. *Schizophrenia Bulletin*, *34*(1), 193–199. https://doi.org/10.1093/schbul/sbm069

Smith, H. L., Summers, B. J., Dillon, K. H., & Cougle, J. R. (2016). Is worst-event trauma type related to PTSD symptom presentation and associated features? *Journal of Anxiety Disorders*, *38*, 55–61. https://doi.org/10.1016/j.janxdis.2016.01.007

Steenkamp, M. M., Litz, B. T., Hoge, C. W., & Marmar, C. R. (2015). Psychotherapy for military-related PTSD: A review of randomized clinical trials. *JAMA*, *314*(5), 489–500. https://doi.org/10.1001/jama.2015.8370

Steil, R., & Ehlers, A. (2000). Dysfunctional meaning of posttraumatic intrusions in chronic PTSD. *Behaviour Research and Therapy*, *38*(6), 537–558. https://doi.org/10.1016/S0005-7967(99)00069-8

Stein, J. Y., Wilmot, D. V., & Solomon, Z. (2016). Does one size fit all? Nosological, clinical, and scientific implications of variations in PTSD Criterion A. *Journal of Anxiety Disorders*, *43*(September), 106–117. https://doi.org/10.1016/j.janxdis.2016.07.001

Strauss, C., Lever Taylor, B., Gu, J., Kuyken, W., Baer, R., Jones, F., & Cavanagh, K. (2016). What is compassion and how can we measure it? A review of definitions and measures. *Clinical Psychology Review*, *47*, 15–27. https://doi.org/10.1016/j.cpr.2016.05.004

Suliman, S., Mkabile, S. G., Fincham, D. S., Ahmed, R., Stein, D. J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive Psychiatry*, *50*(2), 121–127. https://doi.org/10.1016/j.comppsych.2008.06.006

Svendsen, J. L., Kvernenes, K. V., Wiker, A. S., & Dundas, I. (2017). Mechanisms of mindfulness: Rumination and self-compassion. *Nordic Psychology*, *69*(2), 71–82. https://doi.org/10.1080/19012276.2016.1171730

*Tarber, D. N., Cohn, T. J., Casazza, S., Hastings, S. L., & Steele, J. (2016). The role of self-compassion in psychological well-being for male survivors of childhood maltreatment. *Mindfulness*, *7*(5), 1193–1202. https://doi.org/10.1007/s12671-016-0562-4

*Thompson, B., & Waltz, J. (2008). Self-compassion and PTSD symptom severity. *Journal of Traumatic Stress*, *21*(6), 556–558. https://doi.org/10.1002/jts.20374

*Valdez, C. E., & Lilly, M. M. (2016). Self-compassion and trauma processing outcomes among victims of violence. *Mindfulness*, *7*(2), 329–339. https://doi.org/10.1007/s12671-015-0442-3

Van Dam, N. T., Sheppard, S. C., Forsyth, J. P., & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders*, *25*(1), 123–130. https://doi.org/10.1016/j.janxdis.2010.08.011

van der Kolk, B. A. (1996). Trauma and memory. In *Traumatic Stress: The Effects of Overwhelming Experience on Mind, Body, and Society*. New York, NY, US: Guilford Press.

van der Kolk, B. A. (2005). Developmental trauma disorder. *Psychiatric Annals*, *35*(5), 401–409. https://doi.org/10.1038/472298a

van der Kolk, B. A., Spinazzola, J., Blaustein, M. E., Hopper, J. W., Hopper, E. K., Korn, D. L., & Simpson, W. B. (2007). A randomized clinical trial of eye movement desensitization and reprocessing (EMDR), fluoxetine, and pill placebo in the treatment of posttraumatic stress disorder: Treatment effects and long-term maintenance. *The Journal of Clinical Psychiatry*. van der Kolk, Bessel A.: Trauma Center, 1269 Beacon St., Brookline, MA, US, 02446, bvanderk@aol.com: Physicians Post graduate Press. https://doi.org/10.4088/JCP.v68n0105

Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction*, *9*(5), 480–491. https://doi.org/10.1007/s11469-011-9340-7

Walsh, K., Blaustein, M., Knight, W. G., Spinazzola, J., & Van Der Kolk, B. A. (2007). Resiliency factors in the relation between childhood sexual abuse and adulthood sexual assault in college-age women. *Journal of child sexual abuse*, *16*(1), 1–17. https://doi.org/10.1300/J070v16n01_01

Warren, R., Smeets, E., & Neff, K. (2016). Being compassionate to oneself is associated with emotional resilience and psychological well-being. *Current Psychiatry*, *15*(12), 18–32. Retrieved from. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85015061828&partnerID=40&md5=08274a4593ead02ebb13d1d17c8180e6

Watkins, L. E., Sprang, K. R., & Rothbaum, B. O. (2018). Treating PTSD: A review of evidence-based psychotherapy interventions. *Frontiers in Behavioral Neuroscience*, *12*, 258. https://doi.org/10.3389/fnbeh.2018.00258

Weathers, F. W., & Keane, T. M. (2007). The criterion A problem revisited: Controversies and challenges in defining and measuring psychological trauma. *Journal of Traumatic Stress*, *20*(2), 107–121. https://doi.org/10.1002/jts

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. TX: San Antonio.

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013a). *The life events checklist for DSM-5 (LEC-5)*. Boston, MA: National Center for PTSD. Retrieved from. www.ptsd.va.gov

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013b). The PTSD checklist for DSM-5 (PCL-5). *National Center for PTSD*, *5*(August), 2002. https://doi.org/10.1037/t02622-000

Weiss, D. S., & Marmer, C. R. (1997). The impact of event scale- revised. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD: A practitioner's handbook* (pp. 399–411). New York, NY, US: The Guilford Press.

Wells, G. ., Shea, B., O'Connell, D., Peterson, J., Welch, V., Losos, M., & Tugwell, P. (2013). The Newcastle-Ottawa Scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses. Department of Epidemiology and Community Medicine, University of Ottawa. Retrieved from http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp

Williams, S. L., Williams, D. R., Stein, D. J., Seedat, S., Jackson, P. B., & Moomal, H. (2007). Multiple traumatic events and psychological distress: The South Africa stress and health study. *Journal of Traumatic Stress*, *20*(5), 845–855. https://doi.org/10.1002/jts.20252

Woods, H., & Proeve, M. (2014). Relationships of mindfulness, self-compassion, and meditation experience with shame-proneness. *Journal of Cognitive Psychotherapy*, *28*(1), 20–33. https://doi.org/10.1891/0889-8391.28.1.20

World Health Organization. (2018). The International Classification of Diseases-11th classification of mental and behavioural disorders: Diagnostic criteria for research (ICD-11).

*Wu, Q., Chi, P., Lin, X., & Du, H. (2018). Child maltreatment and adult depressive symptoms: Roles of self-compassion and gratitude. *Child Abuse and Neglect*, *80*, 62–69. https://doi.org/10.1016/j.chiabu.2018.03.013

Xue, C., Ge, Y., Tang, B., Liu, Y., Kang, P., Wang, M., & Zhang, L. (2015). A meta-analysis of risk factors for combat-related PTSD among military personnel and veterans. *PLOS ONE*, *10*(3), e0120270. Retrieved from. https://doi.org/10.1371/journal.pone.0120270

Yang, Y., Zhang, M., & Kou, Y. (2016). Self-compassion and life satisfaction: The mediating role of hope. *Personality and Individual Differences*, *98*, 91–95. https://doi.org/10.1016/j.paid.2016.03.086

Yehuda, R., Hoge, C. W., McFarlane, A. C., Vermetten, E., Lanius, R. A., Nievergelt, C. M., … Hyman, S. E. (2015). Post-traumatic stress disorder. *Nature Reviews Disease Primers*, *1*, 15057. Retrieved from. https://doi.org/10.1038/nrdp.2015.57

How to cite this article: Winders S-J, Murphy O, Looney K, O'Reilly G. Self-compassion, trauma, and posttraumatic stress disorder: A systematic review. *Clin Psychol Psychother*. 2020; 27:300–329. https://doi.org/10.1002/cpp.2429

APPENDIX A

TABLE A1 Methodological quality rating scores for cross-sectional studies according to the Newcastle–Ottawa Scale

Authors	Score	Classification
Barlow et al., 2017	4	Poor
Bistricky et al., 2017	5	Fair
Boykin et al., 2018	5	Fair
Dahm et al., 2015	7	Good
Hamrick et al., 2018	6	Good
Hawkins et al., 2018	7	Good
Hiraoka et al., 2015	6	Good
Karatzias et al., 2018	6	Good
Lenferink et al., 2017	8	Good
Maheux et al., 2015	7	Good
Maheux et al., 2016	8	Good
McLean et al., 2018	3	Poor
Meyer et al., 2018	8	Good
Meyer et al., 2019	7	Good
Miron et al., 2014	5	Fair
Miron et al., 2015	5	Fair
Miron et al., 2016	6	Good
Pinciotti et al., 2017	5	Fair
Reffi et al., 2018	5	Fair
Scoglio et al., 2018	7	Good
Seligowski et al., 2015	5	Fair
Tarber et al., 2016	4	Poor
Thompson & Waltz, 2008	4	Poor
Wu et al., 2018	3	Poor

TABLE A2 Methodological quality rating scores for intervention studies according to the Downs and Black Checklist

Authors	Score	Classification
Au et al., 2017	17	Fair
Beaumont et al., 2016	18	Fair
Beaumont et al., 2012	19	Fair
Bergen-Cico et al., 2018	21	Good
Held et al., 2015	16	Fair
Held et al., 2018	15	Fair
Hoffart et al., 2015	20	Good
Kearney et al., 2013	18	Fair
Lang et al., 2017	18	Fair
Müller-Engelmann et al., 2018	19	Fair
Valdez et al., 2016	22	Good