Retraumatisation during Trauma-Focused Interventions for Post-Traumatic Stress Disorder

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Table of Contents

List of Figures

Chapter One: Introduction

None.

Chapter Two: Systematic Review

Chapter Three: Bridging Chapter

None.

Chapter Four: Empirical Study

None.

Chapter Five: Extended Methods

None.

Chapter Six: Extended Discussion and Critical Evaluation

None.

Appendices

List of Tables

Chapter One: Introduction

None.

Chapter Two: Systematic Review

Chapter Three: Bridging Chapter

None.

Chapter Four: Empirical Study

Chapter Five: Extended Methods

None.

Chapter Six: Extended Discussion and Critical Evaluation

None.

Appendices

List of Appendices

Thesis Portfolio Abstract

Background: Trauma-focused psychological interventions for post-traumatic stress disorder (PTSD) have a large evidence base and are recommended by clinical guidelines. A recognised barrier to delivering trauma-focused interventions is a fear of symptom exacerbation or "retraumatisation." However, available evidence supporting these concerns is limited.

Methods: First, a systematic review and meta-analysis is presented, which aims to examine mid-treatment PTSD symptoms in randomised controlled trials of trauma-focused psychological treatments for adult PTSD compared to control groups (non-trauma-focused psychological treatments or passive conditions). Second, an empirical study is presented that used a survey to investigate clinicians' understanding of retraumatisation, estimate its prevalence and relate this to clinicians' confidence in trauma-focused interventions and fear of retraumatisation.

Results: The systematic review included 23 studies, and there was no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused interventions compared to control groups (g=-.16; [95% CI -.34, .03]). Further, there was some evidence of symptom relief at mid-treatment in high quality studies (g=-.25; [95% CI -.48, -.03]).

Surveys were completed by 348 clinicians. There was high variation in the endorsement of signs of retraumatisation. Trauma-focused therapy was reported by clinicians as harmful or leading to a worsening of PTSD symptoms in 3.4% of patients, with this outcome being reported by 12.1% of participants; these participants reported significantly higher total endorsement of signs of retraumatisation (p<.001, d=.69), using a significantly greater number of non-trauma-focused therapies (p<.001, d=.90) and greater fear of retraumatisation (p<.001, d=.94).

Conclusion: The results question whether retraumatisation is a valid construct, as there was no evidence of PTSD symptom exacerbation at mid-treatment and little agreement in defining the term. This thesis highlights the need for a better working definition of retraumatisation.

Chapter One: Introduction to the Thesis Portfolio

Introduction to the Thesis Portfolio

This chapter provides the clinical context for the present portfolio, presenting an overview of the current literature regarding post-traumatic stress disorder (PTSD) in adults. Specifically, PTSD will be discussed in terms of a definition, its impact and prevalence, and the current evidence base for treatment and implementation of this in clinical practice.

Definition, impact, and prevalence of PTSD

It has been over 40 years since PTSD was first defined in the Diagnostic and Statistical Manual of Mental Disorders (3rd ed.; DSM-III; American Psychiatric Association [APA], 1980), and the diagnostic criteria have undergone multiple revisions since. The two current major diagnostic criteria from the DSM-5-TR (APA, 2022) and the International Classification of Diseases 11th Revision (ICD-11; World Health Organization [WHO], 2022) require PTSD symptoms to develop after a traumatic event. A DSM-5-TR diagnosis requires at least one month of symptoms after exposure to "actual or threatened death, serious injury, or sexual violence" (i.e. PTSD "Criterion A"; APA, 2022). By the DSM-5-TR diagnosis, four symptom clusters are necessary and must cause functional impairment: 1) re-experiencing symptoms, 2) avoidance of internal or external associated stimuli, 3) negative alterations in mood and cognition and 4) altered arousal and reactivity. The ICD-11 criteria are narrower, with three key symptom clusters: re-experiencing, avoidance, and hypervigilance (WHO, 2022).

The disease burden from PTSD not only encompasses mental health impacts but also physical health and economic impacts. A recent "state-of-the-art" review summarised the physical health impacts associated with PTSD, including, but not limited to, cardiovascular and cerebrovascular disease, chronic pain, irritable bowel syndrome, dementia, and sleep disorders (Burback et al., 2024). In terms of the economic burden of PTSD, research from the US estimated a cost of just under $20,000 per individual with PTSD, with these costs coming from direct healthcare costs (i.e. medical and pharmaceutical) and indirect costs (i.e. loss of

productivity at work, caregiving, premature mortality, research, training, co-morbidity, psychological therapy, homelessness, disability; Davis et al., 2022). This research estimated the costs per individual with PTSD are higher than coronary heart disease and certain other psychiatric diagnoses (including anxiety and depressive disorders).

In terms of prevalence, the Adult Psychiatric Morbidity Survey in England aims to provide data on a large general population sample. Data from the most recent survey (2014) found that 4.4% of adults screened positive for PTSD in the last month (Fear et al., 2016), which is similar to the prevalence estimate from a national sample in the US (4.7%; Merians et al., 2023). The PTSD Best Practice Guide of the British Medical Journal notes that studies have found considerably different prevalence estimates of PTSD between countries (ranging from .6% in South Africa to 7.4% in the Netherlands; Hoskins & Lewis, 2014). Given the high estimated prevalence and disease burden, effective treatments for PTSD are critical.

Treatment of PTSD

A number of treatments have been developed for PTSD, including psychotherapies, medications, and somatic and complementary therapies (Watts et al., 2013). Guidelines for the treatment of PTSD that are based on research on the effectiveness of treatment interventions for PTSD have been produced by organisations worldwide. A “Guide to Guidelines” for the treatment of PTSD in adults notes that all five of the included international guidelines in the guide strongly recommend trauma-focused psychological interventions (Hamblen et al., 2019).

The National Institute for Health and Care Excellence (NICE) defines that trauma-focused cognitive behavioural therapies (TF-CBT) interventions include cognitive processing therapy (CPT), cognitive therapy for PTSD (CT-PTSD), narrative exposure therapy (NET) and prolonged exposure (PE; NICE, 2018). These interventions target patients’ memories of traumatic event(s) and the meaning associated with these memories. They typically include repeated exposure to reminders of the trauma (in vivo and/or imaginal), elaboration of the

trauma narrative(s) and restructuring of negative beliefs about the trauma and its consequences (Bisson et al., 2013; Ehring et al., 2014).

Implementation of evidence-based treatments for PTSD

Despite the clinical guidelines, there has been uncertainty around the extent to which trauma-focused treatments are routinely used in clinical practice (Becker et al., 2004; Rosen et al., 2004). Research from the Veterans Health Administration (VHA) suggests that utilisation of trauma-focused treatments in clinical practice is low (Lu et al., 2016; Shiner et al., 2013). Given that the VHA is the largest healthcare system in the United States, this research questions the extent to which trauma-focused psychological therapies are implemented in comparable settings, such as the National Health Service (NHS) in the UK, with Finch and colleagues (2020a) finding that TF-CBT was self-reported to be implemented for PTSD by less than 60% of 716 clinicians working in NHS child and adolescent mental health services. This study concluded that trauma-focused, evidence-based psychological treatments for PTSD were not being universally delivered by clinicians in the NHS. It is important to understand the underutilisation of trauma-focused therapy since one of the goals of the NHS long-term plan for psychological therapies is to increase the use of evidence-based practice (Psychological Professions Network, 2018).

Understanding clinicians' beliefs about therapeutic modalities is key to understanding their utilisation. Research on exposure therapy for anxiety disorders using the Therapist Beliefs About Exposure Scale (TBES) has suggested a link between the lack of utilisation of exposure therapy and the belief that exposure is unethical and intolerable for patients (Deacon et al., 2013). The relevance of this research to the implementation of trauma-focused psychological interventions for PTSD has been highlighted by a recent systematic review that reported that one of the most common barriers for clinicians to delivering trauma-focused interventions for PTSD was a fear of increasing patient distress or "retraumatising" patients (Finch et al., 2020b).

The present portfolio

This thesis aims to develop an understanding of the term "retraumatisation." First, the main aim of the systematic review and meta-analysis presented in Chapter Two is to ascertain the effect of trauma-focused psychological interventions on PTSD symptoms at mid-treatment. Mid-treatment was used as traumatic memory processing has started at this point in therapy, and PTSD symptoms were evaluated as a measure of patient distress. Second, the empirical study presented in Chapter Four aims to investigate clinicians' understanding of retraumatisation, estimate its prevalence and relate this to clinicians' confidence in trauma-focused interventions and fear of retraumatisation so that suggestions can be made to address this barrier to delivering trauma-focused psychological treatment.

In addition to the two main chapters, Chapter Three briefly links the two and Chapter Five provides some additional detail to the methods used in the studies. Lastly, Chapter Six integrates the findings of the two studies and expands on their respective strengths and limitations, clinical implications, and suggested directions for future research.

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Chapter Two: Systematic Review

Prepared for submission to Clinical Psychology Review

(Author guidelines included in Appendix A)

A Systematic Review and Meta-analysis of PTSD Symptoms at Mid-Treatment During Trauma-Focused Treatment for PTSD

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Abstract

There is concern that trauma memory processing in psychological therapies leads to PTSD symptom exacerbation. We compared PTSD symptoms at mid-treatment in trauma-focused psychological therapy to control groups. We systematically searched multiple databases and conducted additional searches. We included randomised controlled trials involving adults comparing trauma-focused psychological interventions with active non-trauma-focused interventions or waitlist conditions. Twenty-three studies met our inclusion criteria. We found no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused interventions compared to control groups (g=-.16, [95% confidence interval, CI, -.34, .03]). Sensitivity analyses with high quality studies (g=-.25; [95% CI -.48, -.03], k=12) and with studies with passive controls (g=-.32; [95% CI -.59, -.05], k=8) yielded small effect sizes favouring trauma-focused interventions. At post-treatment, trauma-focused interventions yielded a medium effect on PTSD symptoms compared to all controls (g=-.57; [CI -.79, -.35], k=23). Regarding depression, trauma-focused interventions yielded a small effect size compared to controls at mid-treatment (g=-.23; [95% CI -.39, -.08], k=12) and post-treatment (g=-.45; [CI -.66, -.25], k=12). This meta-analysis found no evidence that trauma-focused psychotherapies elicit symptom exacerbation at mid-treatment; indeed, these findings suggest the benefits of trauma-focused interventions can be experienced through improved depression and possibly PTSD before the conclusion of therapy.

Keywords: post-traumatic stress disorder, meta-analysis, mid-treatment, trauma-focused

Introduction

Posttraumatic stress disorder (PTSD) is common, with a lifetime prevalence of around eight per cent (Kilpatrick et al., 2013). It is diagnosed by the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition; DSM-5-TR) after exposure to a traumatic event when symptoms develop, including re-experiencing, avoidance of associated stimuli, negative alterations in cognition and mood, and hyperarousal (American Psychiatric Association [APA], 2022). Clinical practice guidelines from professional associations and national organisations recommend trauma-focused psychological therapy for adult PTSD (Hamblen et al., 2019). Trauma-focused psychological therapies use cognitive and/or behavioural techniques (e.g., imaginal reliving, cognitive restructuring) to target trauma memories and the meanings associated with these (Watkins et al., 2018). Trauma memory processing is a central component in trauma-focused interventions and begins early in treatment, e.g. in Cognitive Therapy for PTSD (CT-PTSD), imaginal reliving usually begins in session two of treatment (Murray et al., 2022).

Numerous meta-analyses of randomised controlled trials (RCTs) have examined changes in PTSD symptoms from pre- to post-treatment in trauma-focused interventions and reported large effect sizes (e.g. Lewis et al., 2020; Mavranezouli et al., 2020). However, despite this accruing evidence for trauma-focused interventions, relatively recent research suggests trauma-focused interventions are not widely implemented in practice (e.g. research from the National Health Service in the UK found that trauma-focused CBT (TF-CBT) was self-reported to be implemented by less than 60% of clinicians [Finch et al., 2020a]; research from the US Department of Veterans Affairs found that 13% of a sample within the clinic initiated trauma-focused interventions [Lu et al., 2016]). Therefore, there is a need to understand the barriers to providing trauma-focused interventions.

Concerns about trauma memory processing leading to symptom exacerbation have long been raised in the literature. For example, Kilpatrick and Best (1984) suggested that exposure during therapy could increase levels of anxiety in victims of sexual assault. From focus group discussions, Frueh and colleagues (2006) found that clinicians reported a fear of directly addressing trauma memories, fearing this would exacerbate symptoms. A more recent publication on misconceptions of trauma-focused CBT (TF-CBT) notes that clinicians often fear that when patients with PTSD think or talk about trauma memories, it will increase PTSD symptoms (Murray et al., 2022). Similarly, a fear of increasing patient distress and "retraumatisation" through therapy was a theme in a systematic review of clinicians' perceived barriers to using trauma-focused interventions (Finch et al., 2020b). Retraumatisation has been defined as the distress experienced by people with PTSD when sharing a trauma narrative (Duckworth and Follette, 2012). Therefore, to research this identified barrier to providing trauma-focused interventions, we operationalised retraumatisation through a worsening of PTSD symptoms.

Although a recent meta-analysis on the incidences of harm during RCTs of psychological treatments for PTSD reported that TF-CBT was at least as safe as other psychological interventions for PTSD, the meta-analysis notes that 64% of the potentially eligible RCTs did not report on harm and therefore could not be included (Hoppen, Lindemann & Morina, 2022). The limitation demonstrates the need to undertake research to ascertain the impact of trauma-focused psychological treatment using different indices and methodologies to summarise the literature. Drop-out rates could be examined as a potentially important outcome; however, there could be a plethora of reasons for dropout (even including PTSD symptom alleviation). Furthermore, although one meta-regression found evidence that trauma-focused interventions were significantly associated with greater dropout (rate of 18%) compared to those without a trauma focus (rate of 14%), this was a small difference (Lewis et

al., 2020) and another meta-analysis found that a trauma-focus in treatment did not predict dropout (Imel et al., 2013). We, therefore, examined PTSD symptoms at mid-treatment to address clinicians' concerns about exacerbating patients' symptoms by commencing memory processing during therapy. Although different trauma-focused modalities introduce trauma-focused components at different time points within therapy (e.g. session two in CT-PTSD [Murray et al., 2022]; session four in CPT [Resick, Monson, & Chard, 2016]; session three in PE [Fina et al., 2021]), all modalities will have commenced memory processing by mid-treatment.

Depression commonly co-occurs with PTSD; one meta-analysis suggested that more than half of people with PTSD also meet diagnostic criteria for major depressive disorder (Rytwinski et al., 2013). Trauma-focused psychological treatments for PTSD have been suggested to have important impacts on other aspects of mental health, for example, by reducing symptoms of depression (Jayawickreme et al., 2014; Resick et al., 2002) and suicidal ideation (Gradus et al., 2013). Previous research has operationalised an increased severity of a comorbid mental health disorder as an occurrence of an adverse event (Hoppen et al., 2022). Therefore, it is interesting to consider symptom exacerbation in terms of depression, especially as it is pertinent to clinicians' fear of increasing patient distress through therapy as a common symptom of depression concerns suicidal ideation and/or attempts (APA, 2022). Jayawickreme and colleagues (2014) found reliable worsening of symptoms of depression in 2% of patients during trauma-focused interventions compared to 11.9% of patients during waitlist conditions, therefore suggesting the rate of harm (in terms of depressive symptoms) to be lower during trauma-focused interventions compared to not receiving treatment.

We aimed to research the clinician concern of retraumatisation as defined through symptom exacerbation during trauma-focused treatments for PTSD. Due to the previously found lack of reporting on harm during psychological interventions for PTSD (Hoppen,

Lindemann & Morina, 2022), we investigated this by examining mid-treatment PTSD symptoms in RCTs on the efficacy of trauma-focused psychological treatments for adult PTSD compared to control groups (non-trauma-focused psychological treatments or passive controls). We operationalised harm through an increase in PTSD symptoms during therapy, specifically at mid-treatment, to evaluate change after trauma memory processing has begun. As secondary outcomes, we aimed to examine depression symptoms at mid- and post-treatment and PTSD symptoms at post-treatment in trauma-focused treatments compared to controls.

Method

Preregistration

We adhered to the updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Page et al., 2021) throughout this review (reported in Appendix B). We registered the review with PROSPERO (CRD42023377077; https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=377077). Ethical approval was not required as no new data were collected.

Search strategy

We developed optimal search terms through scoping searches and based search terms for trauma-focused treatments on those from a previous review (Morina et al., 2021). Full search terms (with database adaptations) are provided in Appendix C. We limited searches to papers that were published after 1980 (as this was when PTSD was introduced as a diagnosis in the third edition of its Diagnostic and Statistical Manual of Mental Disorders [APA, 1980]). The first reviewer ran the searches on PsycINFO, MEDLINE, CINAHL and PTSDpubs (which includes grey literature) between 31st March and 4th April 2023. The search was re-run on 9th February 2024 to update the review to include any publications since the initial search. Grey literature was not searched using any other methods.

As an additional search process, the first reviewer searched the included studies' reference lists, the 2018 International Society for Traumatic Stress Studies guidelines (Bisson et al., 2019), National Institute for Health and Clinical Excellence (NICE) guidelines for PTSD regarding trauma-focused interventions (NICE, 2018), recent meta-analyses of RCTs for adult trauma-focussed treatment for PTSD published since 2020 (see Appendix D) and papers reporting the original data for any studies that were excluded at the full-text screen due to reporting secondary analyses.

Eligibility criteria

We screened articles against the following inclusion criteria:

Population

Studies used a sample of adults (mean age >18 years) with PTSD. PTSD was defined through a diagnosis according to the International Classification of Diseases (ICD) and/or DSM criteria (through clinician diagnosis or an established diagnostic interview), being above the threshold on a self-report measure, or reporting subsyndromal PTSD symptoms. There were no restrictions on symptom severity or trauma type.

Intervention

We defined "trauma-focused psychological treatments" as interventions, including exposure therapy, CT-PTSD, TF-CBT, EMDR, PE, CPT, and any other psychological intervention that describes the theoretical underpinning and targets trauma and/or PTSD symptoms (Furuta et al., 2018).

We included interventions of any length, where treatment was offered in a standard format (i.e., not intensive) and delivered face-to-face or online.

Outcome measures

The main outcome measure was a mid-treatment measure of PTSD (self- or clinician-rated; where both were available, we used the clinician-rated measure).

Exclusion criteria

Studies were excluded if: a) more than 50% of participants had a traumatic brain injury, b) they conducted secondary analyses of data, c) were written in a language other than English, d) mid-treatment PTSD data were reported to be collected but could not be obtained (after a minimum of two email attempts at least one month apart) or e) augmented therapy with medication.

Screening process

The screening process is outlined in a PRISMA diagram (Figure 1). After removing duplicates, we screened articles by title, abstract, and full text for eligibility. For the abstract screen, the first and second authors screened the first five papers together, and then both screened the next 100 papers independently. We had high inter-rater reliability for the first 100 abstract screens ($\kappa = .91$). The first reviewer then screened the remaining abstracts. For the full-text screen, both reviewers independently screened all the texts with high inter-rater reliability ($\kappa = .92$). Papers excluded at the full-text screen are reported in Appendix E with primary reasons for exclusion. Throughout the screening process, conflicts were resolved through discussion with the last author.

Data extraction

The first author extracted data into pre-defined tables from all included studies: first author, publication year and country; sample details (size, age, percentage female, ethnicity, index trauma type, military/civilian sample); intervention and control arms (type, number and length of sessions); the format (individual/couples/group; online/in person; concurrent substance misuse treatment) and PTSD and available depression symptom data at mid- and post-treatment. Missing data were marked as “not reported.” The extracted data were checked by author AG.

If a study had more than one eligible control group (e.g., emotion focused therapy and waitlist), we selected the more active group (i.e., emotion focused therapy). If a study had more than one type of trauma-focused psychology therapy (e.g., prolonged exposure and cognitive processing therapy), we extracted data for both types.

Quality assessment

We used a method of assessing study quality based on criteria for defining empirically supported therapies (Chambless & Hollon, 1998) and the Cochrane Collaboration criteria for assessing the methodological validity of studies (Higgins & Green, 2008), which has been used by several similar meta-analyses (e.g. Cuijpers et al., 2010; Hoppen et al., 2022; Hoppen et al., 2023; Morina et al., 2021).

We assessed each study on the following criteria: 1) all participants met diagnostic criteria for PTSD at baseline; 2) use of treatment manual; 3) clinicians were trained in specific treatment; 4) treatment integrity was formally checked; 5) data were analysed using intention-to-treat; 6) the study included ⩾50 participants and had a minimal level of power to find statistically significant effects; 7) independent randomisation; 8) blinded assessors of PTSD outcome (self-report assessment also received a positive score; see Appendix F for full criteria). We coded each criterion with '1' if the criterion was fulfilled or '0' if it was not met or reported, meaning each study scored between zero and eight, with a higher score indicating a higher quality and a score of ≥ 7 being categorised as high quality. LP and AG independently assessed quality. We resolved discrepancies with at least two authors.

Data analysis

We used the metafor package in R (Viechtbauer, 2010) for all analyses. Hedges' *g* was calculated, and we used Cohen's convention for the interpretation of small (.2), medium (.5), and large (.8) effects (Cohen, 1988). The heterogeneity of studies was assessed with Cochran's Q test (Cochran, 1954), including its statistical significance and the I^2 statistic (i.e. the

proportion of heterogeneity that can be attributed to between-study heterogeneity rather than error; Deeks et al., 2023). We calculated both 95% confidence intervals (CI) of effect sizes as well as 95% prediction intervals (PI; an interval within which the true estimate is to be expected as trials accumulate; IntHout et al., 2016) to provide better estimates of effect size based on study heterogeneity. We assessed publication bias through inspection of funnel plots and Egger's test (Egger et al., 1997). When Egger's test statistic was statistically significant, we used the trim-and-fill method Field (Duval & Tweedie, 2000) to correct detected asymmetry.

We re-ran the analysis for the studies that included more than one trauma-focused psychological therapy group with the less commonly occurring trauma-focused group (and the same control groups). We defined outliers as studies where the 95% CI of the effect size did not overlap with the pooled effect size (Cuijpers, 2016) and ran outlier-adjusted analyses. We ran four sensitivity analyses to examine the effect of 1) control group type (active vs passive), 2) military sample (civilian vs military sample), 3) concurrent substance misuse treatment (concurrent substance misuse treatment vs no concurrent treatment) and 4) study quality (high vs not high).

Results

Study selection

The study selection process for the identification of studies via databases, other methods and the updated database search is presented in Figure 1 in accordance with the PRISMA 2020 guidelines (Page et al., 2021). After the deletion of duplicates from the database searches, 5,361 records remained. We removed 4,600 at the title screen and 481 at the abstract screen, leaving 280 at the full-text review, of which 18 were included. An additional three records were included from other methods of searching, and two records were included from updating the database searches. Twenty-three studies are included in this review (see Appendix G for references of all the included studies).

< Figure 1 here>

Study characteristics

Study characteristics are summarised in Table 1. Studies were conducted in the United States (*k* = 15), Europe (*k* = 5), Puerto Rico (*k* = 2) and Australia (*k* = 1) and published between 2002 and 2023. In the main intervention group, the mean age of participants was 39.8 (SD = 3.5; range = 18.2 – 54.9), and under half (47.9%) were female. Of the studies that reported on ethnicity (*k* = 18), over half (61.9%) of participants were White. Nine studies used a military sample, and five delivered concurrent treatment for alcohol and/or substance misuse.

Five different types of therapy were included in the trauma-focused psychological therapy groups (PE = 12; CPT = 5; TF-CBT = 3; CT-PTSD = 2; structured writing therapy for PTSD = 1). There were eight studies with a passive control group (all waitlist) and 15 with an active control group (see Table 1 for details). Three studies had more than one trauma-focused group (Reger et al., 2016; Resick et al., 2002; Wells et al., 2015).

Study sample sizes ranged from 17 to 217 (M = 83.0; SD = 51.0). Trauma-focused psychological interventions were delivered to groups (*k* = 4), couples (*k* = 1), and individuals (*k* = 18). The mean number of sessions of trauma-focused psychological therapy interventions was 13 (SD = 5.6), with an average session length of 82 minutes (SD = 22.38).

Approximately half of the studies (*k* = 12; 52.2%) used a version of the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1990) at mid-treatment, and the majority of the remainder (*k* = 6) used a version of the PTSD Checklist (PCL; e.g. PCL-5, Weathers et al., 2013). Notably, four studies included participants with subthreshold PTSD symptoms, the details of which can be found in Appendix H. Further details on study PTSD eligibility criteria, trauma type, PTSD/depression measure(s) at mid-treatment and timing of the mid-treatment measure(s) can be found in Appendix H.

Table 1. *Study characteristics*

Author (year) Country	N[a]	Study groups	Intervention frequency	Treatment format	Age, mean (SD)	% female	Total sample ethnicity	Military sample?	SM intervention?	Total quality score
Allen et al. (2022) Australia	25	iCBT	6 sessions over 10 weeks	Ind Online	41.9 (14.5)	90.5	NR	N	N	5
	24	WL (P)	11 weeks		41.3 (13.5)	89.5				
Back et al. (2019) US	54	COPE	12 weekly sessions (90 mins)	Ind In person	39.7 (11.0)	7.4	49.0% W; 30.0% AA/B; 3.0% H/L; 2.0% O	Y	Y	7
	27	Relapse prevention (A)			41.9 (10.3)	9.9				
Ehlers et al. (2014)[b] UK	31	CT-PTSD	12 weekly sessions (90 mins for initial sessions, 60 mins thereafter)	Ind In person	41.5 (11.7)	58.1	70.0% W; 30.0% NW	N	N	8
	30	Emotion focused supportive therapy (A)			37.8 (9.9)	56.7				
Ehlers et al. (2023) UK	92	iCT-PTSD	12 weeks of SMS and short weekly phone calls (designed to last on average 20 min)	Ind Online	36.3 (12.2)	74.0	87.0% W; 5.0% B; 5.0% O; 3.0% A	N	N	8
	93	iStress-PTSD[c] (A)			35.8 (11.5)	73.0				
Ghafoori et al. (2017) US	47	PE	12 weekly sessions (60 - 90 mins)	Ind In person	35.1 (12.8)	83.0	28.2% W; 43.7% H/L; 19.7% AA; 8.4% O	N	N	7
	24	Person centred therapy (A)			35.3 (10.4)	83.3				
Kline et al. (2021) US	63	COPE	12 sessions (90 mins) once/twice per week	Ind In person	43.2 (13.5)	8.9	65.1% W; 13.8% B; 5.5% A; 15.6% O	Y	Y	4
	56	Seeking Safety[d] (A)			39.7 (11.3)	11.1				
Markowitz et al. (2015)[b] US	38	PE	10 sessions over 14 weeks (90 mins)	Ind In person	41.8 (12.0)	55.0	65.0% W; 17.0% AA; 8.0% A/PI; 9.0% O	N	N	7
	40	Interpersonal psychotherapy (A)	14 weekly sessions (50 mins)		38.1 (11.2)	70.0				
Monson et al. (2006) US	30	CPT	12 sessions twice weekly, over 2 weeks when possible (session length NR)	Ind In person	54.9 (6.5)	6.7	93.3% W; 1.7% A; 5% O	Y	N	8
	30	WL[e] (P)	6 weeks		53.1 (6.1)	13.3				

Author (year) Country	N[a]	Study groups	Intervention frequency	Treatment format	Age, mean (SD)	% female	Total sample ethnicity	Military sample?	SM intervention?	Total quality score
Monson et al. (2012) US	20	Conjoint CBT for PTSD	15 sessions (twice weekly/weekly; session length NR)	Couple In person	40.4 (11.3)	65.0	72.5% W; 27.5% NW	N	N	7
	20	WL (P)	12 weeks		33.8 (10.5)	85.0				
Peck et al. (2023) US	10	PE	12 weekly sessions (60 mins)	Ind	33.8 (4.6)	60.0	96.7% W; NR	N	Y	6
	10	TAU (P)	12 weeks	In person	44.7 (8.9)	70.0				
Rauch et al. (2015) US	18	PE	10–12 sessions (80 mins; period over which sessions occurred NR)	Ind In person	30.0 (18.4)	18.2	83.3% W; 13.9% B; 2.8% O	Y	N	2
	18	Present-centered therapy (A)			53.6 (28.7)	0				
Reger et al. (2016) US	54	PE	10 sessions (90-120 mins; weekly/twice weekly, with flexibility)	Ind In person	30.9 (7.1)	5.6	72.2% W; 13.0% H/L; 7.4% A/PI; 3.7% B; 3.7% O	Y	N	8
	54	Waitlist (P)	5 weeks		30.4 (6.5)	1.9				
	54	Virtual reality exposure (O)	10 sessions (90-120 mins; weekly or twice weekly, with flexibility)		29.5 (6.5)	3.7				
Resick et al. (2002) US	40	PE (O)	12 sessions over 6 weeks (90 mins; except 1st session which was 30 mins)	Ind In person	31.9 (10.4)	100	71.0% W; 25.0% AA; 4.0% O	N	N	7
	40	Waitlist (P)	6 weeks		33.9 (9.6)	100				
	41	CPT (O)	12 sessions over 6 weeks (90 mins)		30.6 (9.7)	100				
Resick et al. (2015) US	56	Group CPT (cognitive version only)	12 sessions over 6 weeks (90 mins)	Group In person	31.8 (7.3)	7.0	63.0% W; 20.0% B; 9.0% H/L; 9.0% O	Y	N	5
	52	Group present-centered therapy (A)			32.4 (7.9)	8.0				
Rosner et al. (2019) Germany	44	Developmentally adapted CPT	30 sessions over 16 to 20 weeks (50 mins; with 6 optional sessions)	Ind In person	18.2 (2.2)	89.0	NR	N	N	5
	44	Waitlist with treatment advice[f] (P)	At least 28 weeks		18.1 (2.2)	82.0				
Ruglass et al. (2017)[b] US	39	COPE	12 sessions over 6 weeks (90 mins)	Ind In person	43.1 (10.0)	28.2	59.1% N/AA; 20% H/L; 18.2% W; 2.7% O	N	Y	6
	43	Relapse prevention (A)			44.2 (9.1)	37.2				

Author (year) Country	N[a]	Study groups	Intervention frequency	Treatment format	Age, mean (SD)	% female	Total sample ethnicity	Military sample?	SM intervention?	Total quality score
Sloan et al. (2018) US	98	Group CBT	14 sessions over 16 weeks (120 mins)	Group In person	54.4 (11.4)	0	74.2% W; 16.7% AA; 9.1% O	Y	N	8
	100	Group present-centered therapy (A)			57.22 (12.5)	0				
van Dam et al. (2013) Netherlands	19	Structured Writing Therapy for PTSD + group intensive SUD CBT	10 weekly sessions (45–60 mins) + 20 sessions over 14 weeks (120 mins)	Ind In person	42.6 (8.4)	31.6	73.5% W; 14.7% O; 11.8% B	N	N	3
	17	Group intensive SUD CBT (A)	20 sessions over 14 weeks (120 mins)		41.9 (10.0)	33.3				
Vera et al. (2011) Puerto Rico	7	PE (culturally adapted)	15 weekly sessions (90–120 mins)	Ind In person	45.8 (NR)	0	NR	N	N	6
	7	UC[7] (A)	15 weeks			0				
Vera et al. (2021) Puerto Rico	49	PE (culturally adapted)	12-15 weekly sessions (90 mins)	Ind In person	44.1 (11.5)	73.5	100% H/L	N	N	7
	49	Applied relaxation (A)	12-15 weekly sessions (60–90 mins)		43.2 (12.7)	89.3				
Wells et al. (2015) UK	11	PE	8 weekly sessions (60 mins)	Ind In person	40.5 (10.9)	40.0	NR	N	N	6
	10	WL (P)	8 weeks		42.7 (18.5)	60.0				
	11	Metacognitive therapy (O)	8 weekly sessions (60 mins)		40.6 (11.9)	36.4				
Zaccari et al. (2022) US	17	CPT	12 weekly sessions (90 mins)	Group In person	44.2 (7.9)	100	80.5% AA; 12.2% W; 7.3% O	Y	N	6
	24	Trauma-sensitive yoga[g] (A)	10 weekly sessions (60 mins)		46.1 (12.4)	100				
Zaccari et al. (2023) US	58	CPT	12 weekly sessions (90 mins)	Group In person	48.3 (11.6)	100	72.6% AA; 19.1% W; 0.8% A; 6.9% O	Y	N	7
	71	Trauma-sensitive yoga[g] (A)	10 weekly sessions (60 mins)		48.2 (11.0)	100				

Note. Ind= individual**;** NR = not reported; SM = substance misuse. **Ethnicity:** A = Asian; AA = African American; B = Black; H/L = Hispanic/Latino; NW = Non-white; O = Other/unknown; PI = Pacific Islander; W = White. **Other:** CBT = Cognitive Behavioural Therapy; COPE = Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure; NR = not reported; SM = substance misuse. **Intervention types**: CBT = cognitive behavioural therapy; CPT = cognitive processing therapy; iCT-PTSD = cognitive therapy for PTSD; PE = prolonged exposure; UC = usual care; WL = waiting list. **Study groups**: A = active control; O = other trauma-focused Tx; P = passive control.

[a] N at randomisation.

[b] This study also included an intensive Cognitive Therapy group which has been excluded from this systematic review.

[c] iStress-PTSD was a stress management programme (Asplund Persson et al., 2018) that was adapted for people with PTSD by Andersson and colleagues for this trial.

[d] Seeking Safety is a present-focused therapy focused on coping skills and establishing safety for people with comorbid PTSD and substance use disorder (Najavits, 2002).

[e] Participants in WL were allowed to continue interventions not focused on PTSD.

[f] Four participants received pharmacological treatment, one participant received psychotherapy, and two participants received both.

[g] Protocol “integrates themes related to establishing safety, individual choice, interoception, being in the present moment, and taking effective action” (Zaccari et al., 2022).

Study quality

The quality of trials was high for 12 studies (sum score ≥ 7 out of 8), and the mean quality score across trials of 6.2 (out of 8; SD = 1.6). Total quality ratings are reported in Table 1, and quality ratings for each item per study are reported in Appendix I.

Mid-treatment PTSD symptoms

See Table 2 for results at mid-treatment for PTSD symptoms. Across the 23 included trials, 1,454 participants completed the mid-treatment assessment of PTSD symptoms. The effect size at mid-treatment for trauma-focused psychological interventions compared to control conditions was non-significant as the 95% CI crossed zero (g = -.16 [95% CI -.34, .03]). Heterogeneity was substantial, Q = 55.51, df = 22, p < .001, I^2 = 63%. The prediction interval was wide and crossed zero (-.87, .54). When the outlier (Zaccari et al., 2022) was removed, the effect size was significant (g = -.19 [95% CI -.36, -.03]; k = 22); however, the prediction interval remained quite wide (-.75, .37). A forest plot of all effect sizes and CIs from each study is shown in Figure 2, split by studies with an active and passive control group. From inspection of the funnel plot (Figure 3), there was asymmetry. Egger's test was significant (intercept: -.012; 95% CI [-.54, .56]; p = .52, z = -.64). Applying the trim and fill method inputted four missing studies (see Figure 4).

< Figure 2, 3 and 4 here>

Although control condition type (i.e. active vs passive control group) did not moderate the overall effect (p = .11), the studies with a passive control group had a small and statistically significant effect (g = -.32), unlike studies with an active control group where the effect was trivial and not significantly different from zero (g = -.07). Estimates of heterogeneity suggested there was considerable variance between the studies with an active control (Q = 39.35, I^2 = 71%), but non-significant variance in studies with a passive control (Q = 12.04, I^2 = 40%).

There was no significant difference in the effect size between high quality studies (k = 12) and those that were not (k = 11; p = .12); however, the high quality studies had a statistically significant effect size (g = -.25), unlike the non-high quality studies (g = -.01). There was also no significant difference in the effect size between studies with military or civilian samples (p = .13) or studies that concurrently treated substance misuse versus those that did not (p = .13).

When we re-ran the analysis using the other intervention groups of trauma-focused interventions from the three studies that had more than one trauma-focused intervention, trauma-focused psychological interventions yielded non-significant negative effect compared to control groups (g = -.18 [95% CI -.39, .03]; k = 23).

Table 2. *Mid-treatment PTSD symptoms*

Analysis	*k*	N	*g*	95% CI	95% PI	Q	I^2	*p* of moderation test
All	23	1454	-.16	-.34, .03	-.87, .54	55.51***	63%	
By control group type								.11
Active	15	1058	-.07	-.32, .17	-.86, .72	39.35***	71%	
Passive	8	396	-.32	-.59, -.05	-.86, .22	12.04	40%	
By study quality								.12
High	12	1014	-.25	-.48, -.03	-.92, .41	30.41**	66%	
Not high	11	440	-.01	-.34, .32	-.91, .89	23.44**	62%	
By military								.13
Civilian	14	775	-.20	-.42, .02	-.79, .40	25.12**	50%	
Military	9	679	-.09	-.47, .28	-1.14, .96	29.75***	81%	
By substance misuse treatment								.13
No concurrent substance misuse treatment	18	1235	-.18	-.38, .02	-.85, .49	43.71***	63%	
Concurrent substance misuse treatment	5	219	-.04	-.54, .45	-1.06, .98	11.62**	66%	
Outlier-adjusted								
All, excluding outlier	22	1432	-.19	-.36, -.03	-.75, .37	43.25**	53%	.07
All active controls, excluding outlier	14	1036	-.13	-.33, .08	-.71, .46	27.97**	57%	

* $p < .05$; ** $p < .01$; ***$p < .001$

Mid-treatment depression symptoms

Twelve of the included trials reported mid-treatment assessment measures of depression (N = 957). Trauma-focused psychological interventions yielded a small and statistically significant effect size compared to controls in terms of depression at mid-treatment (g = -.23 [95% CI -.39, -.08]; k = 12). Estimates of heterogeneity suggested little variance between the studies, Q = 18.81, df = 11, p = .24, I^2 = 24%. See Table 3 for results at mid-treatment for depression symptoms and a forest plot of all effect sizes and CIs from each of the studies in Figure 5.

Of the studies that reported mid-treatment for depression symptoms, eight studies had an active control group (N = 761), and four had a passive control group (N = 196). The studies with a passive control produced a small statistically significant effect size (g = -.46). Studies with an active control yielded an effect size of g = -.15, with the 95% confidence interval including 0 (-.30, .00). Moderation analysis did not reveal a significant difference between these groups.

Table 3. *Mid-treatment depression symptoms*

	k	N	*g*	95% CI	95% PI	Q	I^2	*p* of moderation test
All	12	957	-.23	-.39, -.08	-.53, .06	13.81	24%	
By control group type								.09
Active	8	761	-.15	-.30, .00	-.34, .04	7.25	7%	
Passive	4	196	-.46	-.79, -.12	-.91, .00	3.30	21%	

< Figure 5 here>

When re-ran the analysis using the other intervention groups of trauma-focused interventions from the three studies that had more than one trauma-focused group, we similarly found that trauma-focused psychological interventions yielded a small effect size compared to control conditions for depression at mid-treatment (g -.21 [95% CI -.38, -.07]; k = 12).

End of treatment PTSD and depression symptoms

Trauma-focused psychological interventions yielded a medium effect on PTSD symptoms (g = -.57 [95% CI -.79, -.35]; k = 23) and a small effect on depression symptoms (g -.45 [95% CI -.66, -.25]; k = 12) at post-treatment compared to control conditions. There was a substantial degree of heterogeneity between the studies in terms of post-treatment PTSD symptoms (I^2 = 70%) and a moderate degree of heterogeneity between the studies in terms of post-treatment depression symptoms (I^2 = 47%). Table 4 reports the post-treatment PTSD and depression symptom results for trauma-focused psychological interventions compared to control conditions, and a forest plot for post-treatment PTSD symptoms can be found in Figure 6 and for depression symptoms in Figure 7. The effect sizes for both outcomes were moderated by control type, with passive control conditions yielding larger effects than active control condition trials.

Table 4. *Post-treatment PTSD and depression symptoms*

	k	N	*g*	95% CI	95% PI	Q	I^2	*p* of moderation test
PTSD								
All trials	23	1298	-.57	-.79, -.35	-1.45, .30	67.38***	70%	
By control condition type								<.001
Active	15	935	-.33	-.57, -.09	-1.07, .40	35.92**	64%	
Passive	8	363	-1.00	-1.22, -.78	-1.22, -.78	4.00	0%	
Depression								
All trials	12	854	-.45	-.66, -.25	-.96, .06	13.81	47%	
By control group type								.01
Active	8	680	-.32	-.47, -.17	-.47, -.17	9.48	.02%	
Passive	4	174	-.82	-1.36, -.29	-1.79, .14	7.18	59%	

* p < .05; ** p < .01; ***p < .001

< Figure 6 and 7 here>

Discussion

This systematic review and meta-analysis examined mid-treatment PTSD symptoms in RCTs comparing trauma-focused psychological treatments for adult PTSD to controls. As secondary aims, this review examined depression symptoms at mid- and post-treatment and PTSD symptoms at post-treatment in trauma-focused treatments compared to controls.

We found no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused psychological interventions compared to control groups (i.e., effect sizes produced from all analyses had a negative magnitude). In the main analyses, a statistically non-significant effect size was produced (g = -.16; [95% CI -.34, .03]), and heterogeneity was high. Outlier-adjusted analyses yielded a statistically significant effect size (g = -.19; [95% CI -.36, -.03]), favouring trauma-focused psychological therapies. A sensitivity analysis with only high quality studies also produced a small statistically significant effect size (g = -.25; [95% CI -.48, -.03]). This suggests that not only is there no evidence for PTSD symptom exacerbation, but there is some evidence of PTSD symptom relief in trauma-focused psychological therapies compared to control groups at mid-treatment in high quality studies. However, in all analyses of mid-treatment PTSD symptoms, the prediction interval was non-significant, meaning that in future studies, there is a chance that the effect sizes observed in this meta-analysis may not be replicated. Furthermore, although we did not find evidence of symptom exacerbation in trauma-focused compared to non-trauma-focused psychological treatments, it is important to note that this is a comparison of mean scores, so it is possible that some patients receiving trauma-focused treatment for PTSD may experience symptom exacerbation. However, we found no evidence that any symptom exacerbation was worse in those receiving trauma-focused treatments than those not.

Trauma-focused psychological interventions yielded a small effect size compared to control conditions in terms of depression symptoms at mid-treatment (g = -.23; [95% CI -.39, -.08], k = 12), and there was no significant heterogeneity. This effect size increased to g = -.46 when we only analysed studies with a passive control group, however it should be noted that this analysis included only four studies.

At post-treatment, trauma-focused psychological interventions yielded a medium effect on PTSD symptoms when compared to all control conditions (g = -.57; [CI -.79, -.35]) and a large effect when only compared to studies with a passive control group (g = -1.00; [CI -1.22, -.78]). A large effect size at post-treatment has been found in previous meta-analyses, e.g. Mavranezouli and colleagues (2020) found that TF-CBT compared to waitlist at post-treatment produced a standardised mean difference of -1.46 (95% CI -1.87, -1.05). Crucially, these findings suggest that trauma-focused therapies included in this review yielded significant improvements compared to control conditions (regardless of which type of control) with respect to PTSD at post-treatment, even if they had not by the mid-treatment assessment.

Trauma-focused psychological interventions also yielded a small effect on depression symptoms at post-treatment (g = -.45; [95% CI -.66, -.25]). These results support the suggestion that trauma-focused treatments for PTSD can have impacts beyond the focus of the trauma work (e.g. Resick et al., 2002). However, the prediction interval crossed the line of no effect (95% PI -.96, .06) suggesting that an effect in this direction might not be observed in future studies.

Strengths and limitations

We strengthened this review by following best practice: we pre-registered it with PROSPERO and adhered to PRISMA guidance. The reliability of the review process was confirmed by an independent rater for screening, data extraction and quality assessment. The search process was extensive since we used deliberately broad search criteria, conducted our

search on four databases, searched included studies' reference lists and searched papers from other relevant publications and recent meta-analyses of RCTs.

We included individuals with subthreshold PTSD as studies indicate that people with subthreshold PTSD experience similar levels of distress and impairment as people who meet the full PTSD criteria (Grubaugh et al., 2005; Zlotnick, Franklin & Zimmerman, 2002) and we aimed to keep the inclusion criteria broad as we expected only a small number of studies to be included from our scoping search. It should be noted that since four of the included studies included people with subthreshold PTSD, the results from these studies may not be generalisable to populations that meet all the PTSD diagnostic criteria.

There are some inherent limitations to this review. Firstly, only a small proportion of the overall literature reported data on mid-treatment PTSD symptoms, and the studies reporting this may not be representative of all studies on trauma-focused interventions for PTSD. Further, there were only a small number of studies of each intervention type, meaning comparisons between different types of trauma-focused interventions were not possible. Another inherent limitation is that it is possible that there were participants in studies who had dropped out from treatment before mid-treatment who had experienced symptom exacerbation. Therefore, the included mid-treatment study data might not capture all experiences of symptom exacerbation during treatment. Lastly, this review only considered symptom exacerbation during therapy through PTSD and depression, and other possible markers of harm were not evaluated.

Future research

We encourage future RCTs on trauma-focused interventions for PTSD to collect and report (even in a repository) on PTSD symptoms throughout treatment, or at least at mid-treatment. This will allow future research to draw more reliable conclusions on PTSD symptom exacerbation during trauma-focused therapy. It would be clinically relevant to research

symptom exacerbation during trauma-focused interventions when these treatments are delivered by less experienced clinicians.

When we operationalised harm during therapy as an increase in PTSD symptoms at mid-treatment, we did not find evidence of such harm. However, harm during therapy should be assessed using other methods in future research (e.g. suicidality, functional impairment).

Clinical implications

The results of this meta-analysis suggest that trauma-focused psychological therapies are not associated with PTSD symptom exacerbation at mid-treatment. This meta-analysis, along with research suggesting that symptom exacerbation occurs more frequently in waitlist conditions than conditions receiving trauma-focused therapy (Jayawickonreme et al., 2014) suggests that trauma-focused interventions should not be withheld from patients based on the fear of PTSD symptom exacerbation. Moreover, at mid-treatment, compared to control conditions, trauma-focused interventions yielded a small effect size (g = -.16 [95% CI -.34, .03]), yet this increased at post-treatment to a medium effect size (g = -.57 [95% CI -.79, -.35]). This, therefore, suggests that the full course of treatment is necessary for the full benefits of trauma-focused psychological therapies for PTSD to be detected.

Since Finch and colleagues (2020b) reported fear of increasing patient distress through therapy as a theme in a systematic review of clinicians' perceived barriers to using trauma-focused interventions, clinician training is necessary to share information with clinicians on symptom change during trauma-focused interventions. This meta-analysis suggests that trauma-focused interventions might show gains relative to non-trauma-focused interventions/waitlists in terms of symptoms of depression and PTSD, even at mid-treatment.

Conclusion

We found no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused psychological interventions compared to controls. Further, sensitivity analyses with

high quality studies and studies with passive controls produced statistically significant small effect sizes favouring trauma-focused interventions (g = -.25). At post-treatment, trauma-focused interventions yielded a medium effect on PTSD symptoms (g = -.57) when compared to all control conditions and a large effect when only compared to studies with a passive control (g = -1.0), therefore suggesting that a full course of treatment is necessary to continue to reduce PTSD symptoms after mid-treatment. Further, this review suggests that trauma-focused interventions can impact symptoms of depression, finding a statistically significant but small effect size compared to control conditions in terms of depression symptoms at mid-treatment (g = -.23) and post-treatment (g = -.45). In sum, we found no evidence for PTSD or depression symptom exacerbation at mid- or post-treatment in trauma-focused interventions compared to controls, suggesting that trauma-focused interventions should not be withheld based on fear of symptom exacerbation.

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Contributors

Lucy Purnell: conceptualisation, methodology, formal analysis, investigation, writing – original draft, writing – review & editing, project administration. **Alicia Graham:** methodology. **Kenny Chiu:** writing – review & editing, project administration, supervision. **David Trickey:** writing – review & editing. **Richard Meiser-Stedman:** conceptualisation, methodology, formal analysis, investigation, writing – review & editing, project administration, supervision.

Conflict of interest

RMS & DT train mental health professionals in the use of trauma-focused cognitive-behavioural therapies for the treatment of PTSD. All other authors declare they have no conflicts of interest.

Figure 1. *PRISMA flowchart*

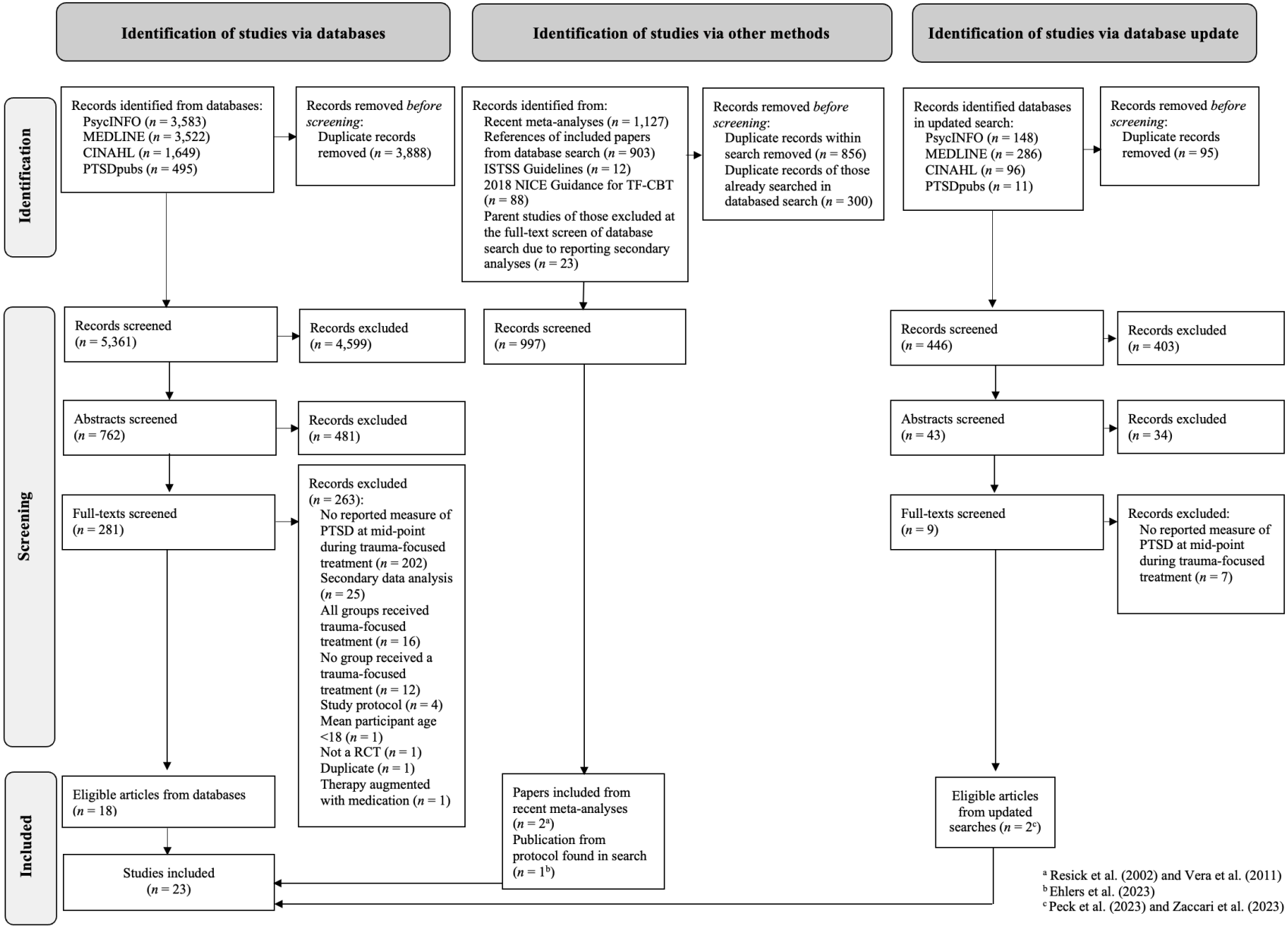


Figure 2

Forest plot of mid-treatment PTSD symptoms by active and passive control conditions

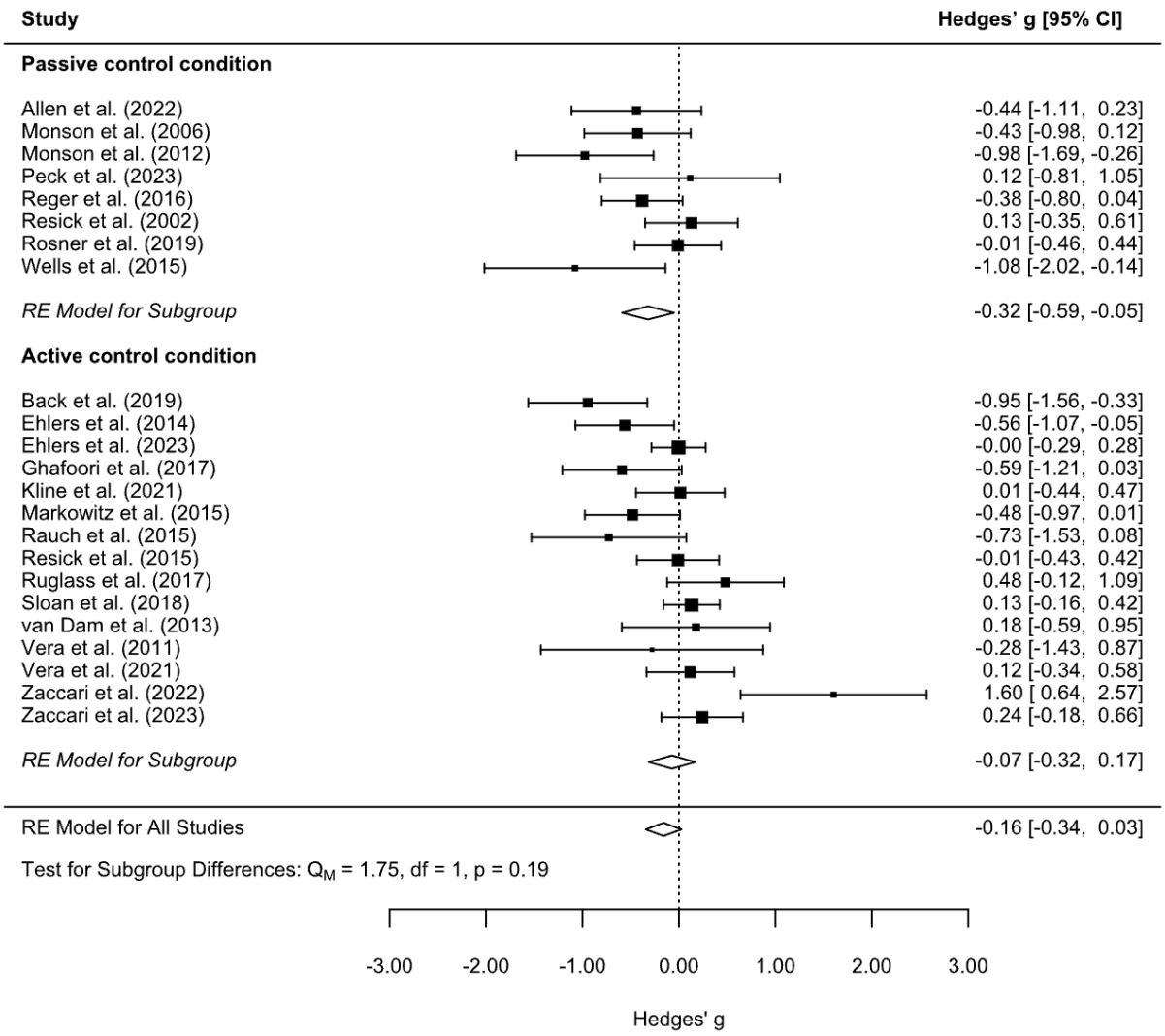
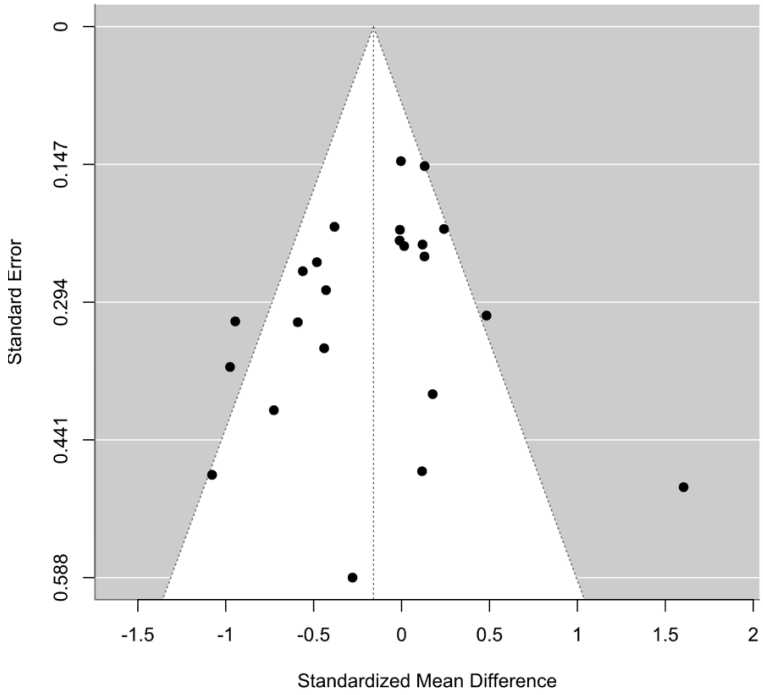


Figure 3

Funnel plot of mid-treatment PTSD Symptoms



Note. Data point on the far right is outlier (Zaccari et al., 2022) The dashed lines creating a triangular area indicate the 95% confidence limits and the vertical dashed line represents the overall effect size.

Figure 4

Funnel plot of mid-treatment PTSD Symptoms after applying the trim-and-fill method

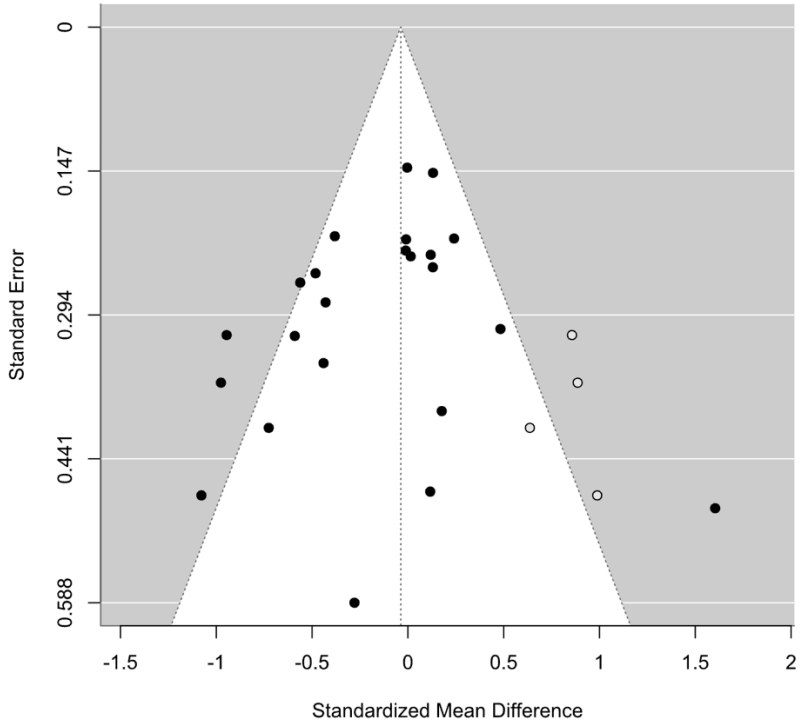


Figure 5

Forest plot of mid-treatment depression symptoms

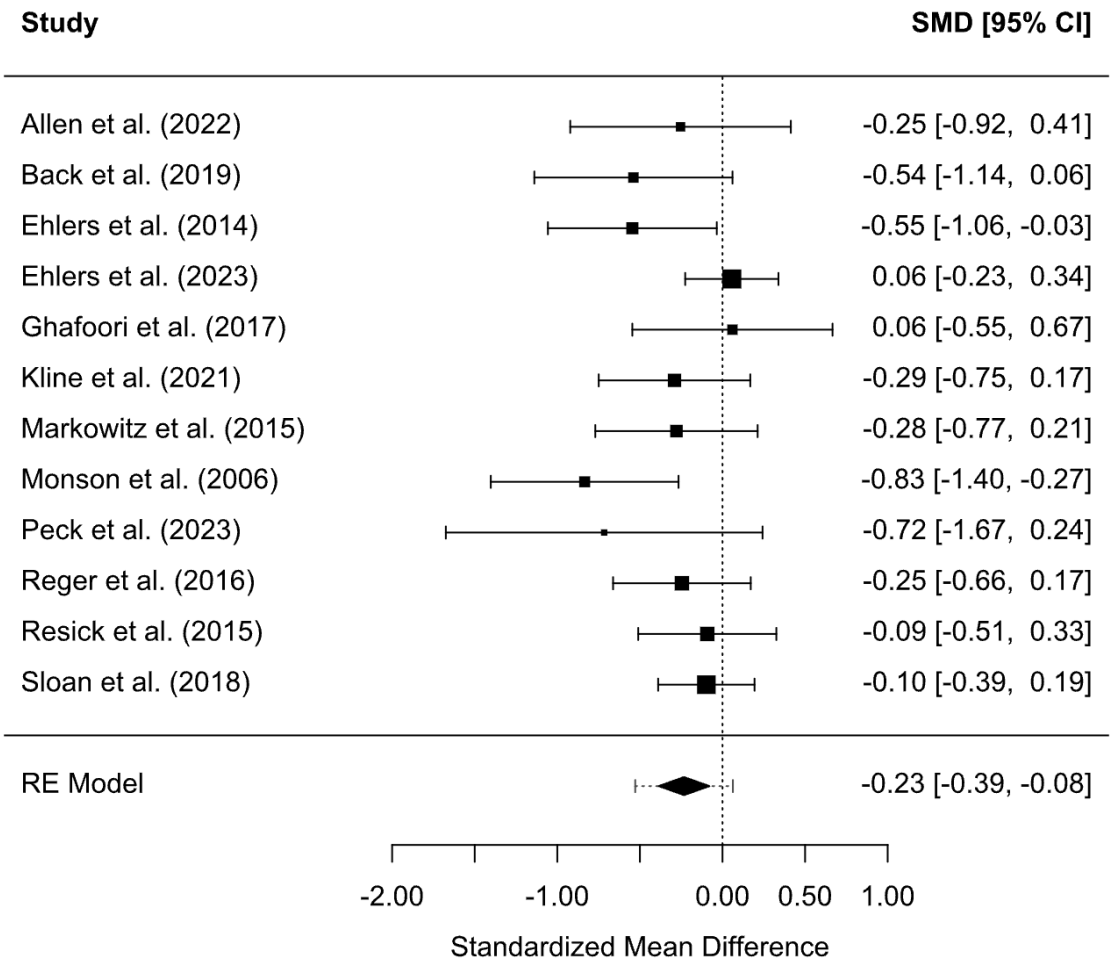


Figure 6

Forest plot of post-treatment PTSD symptoms

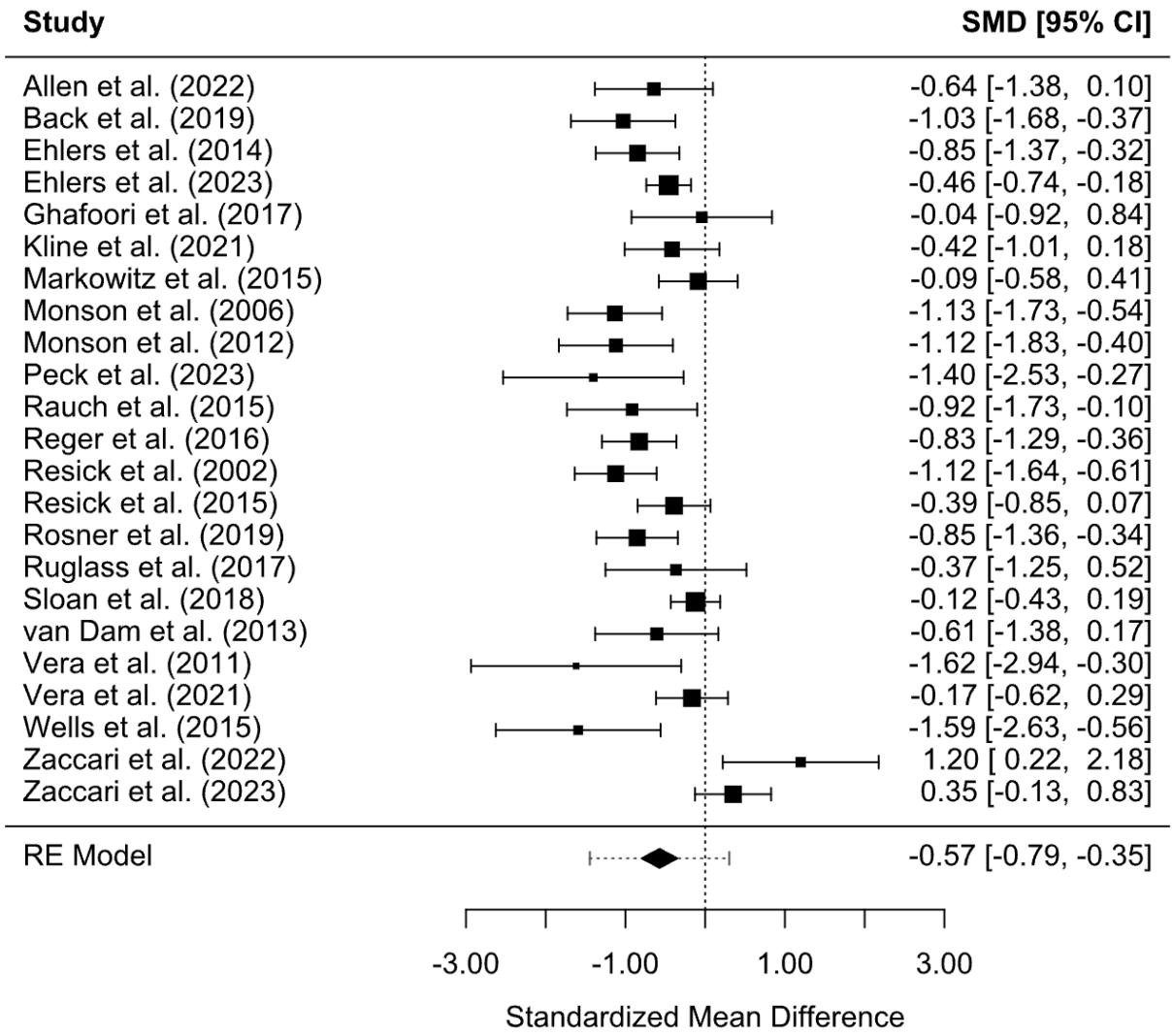
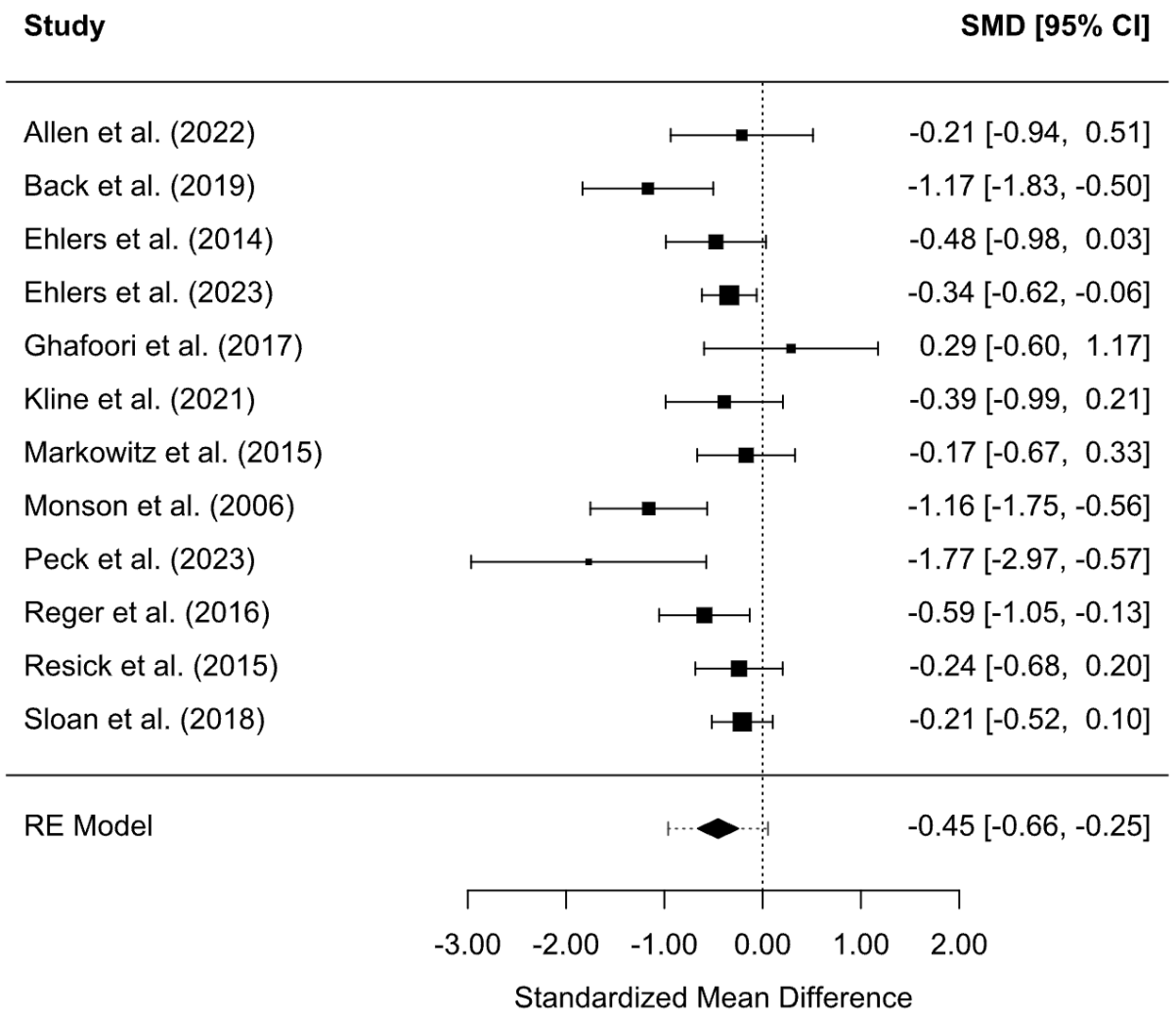


Figure 7

Forest plot of post-treatment depression symptoms



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Chapter Three: Bridging Chapter

Bridging Chapter

Research suggests that clinicians fear symptom exacerbation in trauma-focused psychological interventions for PTSD (as outlined in Chapter 2, pg 21), and a specific fear of retraumatisation has been highlighted in the literature as a barrier to delivering trauma-focused interventions (as outlined in Chapter 4, pg 63).

For the systematic review and meta-analysis, we operationalised harm through an increase in PTSD symptoms during therapy, specifically at mid-treatment, to evaluate change after trauma memory processing has begun. We found no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused interventions compared to control groups and suggest that trauma-focused interventions should not be withheld based on fear of symptom exacerbation. However, the meta-analysis compared mean scores at mid-treatment, so it is possible that some patients undergoing trauma-focused treatment for PTSD may experience symptom exacerbation. Further, it is possible that retraumatisation might be experienced in ways other than symptom exacerbation.

Therefore, in this empirical study, we aimed to explore the concept of retraumatisation beyond solely symptom exacerbation (as in the systematic review) by investigating clinicians' endorsement of certain patient experiences as potential signs of retraumatisation. We also aimed to investigate the proportion of patients that clinicians reported they had witnessed retraumatisation during trauma-focused therapy (which we defined as therapy that had been harmful or led to a worsening of PTSD symptoms). In the empirical study, we expanded on the concept of retraumatisation and explored its prevalence on an individual level (through clinician report) to build on the comparison of mean symptom measures in the meta-analysis.

Chapter Four: Empirical Study

Prepared for Submission to Journal of Anxiety Disorders

(Author guidelines included in Appendix J)

Clinicians' Perspectives on Retraumatisation during Trauma-Focused Interventions for Post-Traumatic Stress Disorder: A Survey of UK Mental Health Professionals

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Abstract

Concerns regarding retraumatisation have been identified as a barrier to delivering trauma-focused therapy for post-traumatic stress disorder (PTSD). We explored clinicians' understanding of what constitutes signs of retraumatisation (SoR), their reported incidences of witnessing retraumatisation, their use of (and confidence in) therapies for PTSD, their fear of retraumatisation during therapy for PTSD, and whether having witnessed retraumatisation was associated with these variables. We surveyed 348 clinicians working with people with PTSD. There was variation around what constitutes SoR. Retraumatisation was reported by participants in 3.4% of patients undergoing trauma-focused therapy for PTSD. A variety of therapies were routinely used. Mean confidence for the most strongly endorsed trauma-focused therapy was 74.6 (/100; *SD*=20.3); 14.4% did not use any trauma-focused therapy. There was a significant negative correlation between highest reported confidence in trauma-focused therapy and endorsement of SoR (*r*=-.25) and fear of retraumatisation (*r*=-.28). Mean fear of retraumatisation was 30.3 (/100; *SD*=23.4). Participants who had witnessed retraumatisation reported significantly greater endorsement of SoR (*d*=.69) and fear of retraumatisation (*d*=.94). Confidence in using therapies for PTSD was varied and related in various respects to how clinicians understood retraumatisation. Retraumatisation is interpreted very differently by clinicians, and its definition and utility warrant further research.

Keywords: Posttraumatic stress disorder; Psychotherapy; Therapists' characteristics

1.1 Introduction

Post-traumatic stress disorder (PTSD) in ICD-11 (World Health Organization, 2022) comprises three key symptom clusters: re-experiencing the trauma, avoidance of trauma-related stimuli, including trauma-related thoughts and feelings, and increased arousal and reactivity from a persistent sense of threat. Trauma-focused cognitive behavioural therapy (TF-CBT) and eye movement desensitisation and reprocessing (EMDR) have been found to be the most efficacious treatment approaches for PTSD by large meta-analyses (Lewis et al., 2020; Mavranezouli et al., 2020). The National Institute for Health and Care Excellence (NICE) defines that TF-CBT interventions include cognitive processing therapy (CPT), cognitive therapy for PTSD (CT-PTSD), narrative exposure therapy (NET) and prolonged exposure (PE; NICE, 2018). These interventions target patients' memories of traumatic event(s) and the meaning associated with these event(s). They typically include repeated exposure to reminders of the trauma (in vivo and/or imaginal), elaboration of the trauma narrative(s) and restructuring of negative beliefs about the trauma and its consequences (Bisson et al., 2013; Ehring et al., 2014). In a "Guide to Guidelines" for the treatment of PTSD in adults, all of the five included international guidelines strongly recommend trauma-focused therapies (Hamblen et al., 2019). Despite this recommendation, Finch and colleagues (2020a) found that TF-CBT was self-reported to be implemented by less than 60% of 716 clinicians working in UK child and adolescent mental health services.

1.1.1 Retraumatisation as a barrier to delivering trauma-focused interventions

A recent systematic review suggested that one of the most common barriers for clinicians to deliver trauma-focused interventions for PTSD is a fear of "retraumatising" patients (Finch et al., 2020b). Duckworth and Follette (2012) recognised in a commentary that "retraumatisation" has been used with different meanings in PTSD literature to refer to 1) the response from multiple exposures to trauma and 2) the distress experienced when sharing a

trauma narrative. In relation to the latter, it has been suggested that some clinicians worry that patients are likely to experience an increase in PTSD symptoms or distress during trauma-focused therapy (Murray et al., 2022) that could be permanent (Schock et al., 2010) and intolerable (Zoellner et al., 2011). However, there is no agreement in the literature to support a consensus on what constitutes retraumatisation. In response to these fears, it has been suggested that some clinicians may avoid or delay actively working with trauma memories (Murray & El-Leithy, 2022) or that clinicians may be overly cautious in the way they deliver therapy (Deacon et al., 2013). There is a lack of research to help us to understand the influences on clinicians' fears regarding retraumatisation and how this may create a barrier to delivering trauma-focused interventions (Finch et al., 2020b).

One way to operationalise retraumatisation could be a reliable worsening of PTSD symptoms due to trauma memory processing (during or by the end of treatment). There is evidence suggesting that PTSD symptom exacerbation during trauma-focused interventions is relatively uncommon, not long-lasting, and tolerable. A study pooling data from two RCTs exploring PTSD symptom exacerbation (defined as an increase greater than 6.15 points on the Posttraumatic Diagnostic Scale [PDS; Foa et al., 2016a] or PTSD Symptom Scale [PSS; Foa et al., 2016b] at least once during treatment) reported that 20.0% of patients in the PE group and 28.6% of patients during CPT group experienced PTSD symptom exacerbation and that these patients were still highly likely to experience an improvement in symptoms by the end of treatment (Larsen et al., 2016). Further, qualitative research has suggested that an increase in PTSD symptoms is tolerable and "worth the pain" (Shearing et al., 2011). A study from routine clinical practice found that only a small minority of patients (1.2%) experienced reliable exacerbation of PTSD symptoms (defined as an increase of greater than 6 on the PDS) between the first treatment session and the end of treatment during trauma-focused psychological

interventions (Ehlers et al., 2013). There is a need to explore whether clinicians operationalise retraumatisation through an increase in PTSD symptoms.

No study has explored clinicians' perspectives on retraumatisation during trauma-focused psychological treatments. It is important to understand clinicians' perspectives on retraumatisation regarding trauma-focused interventions, as they may be a barrier to implementing trauma-focused interventions.

1.1.2 Aims

We collected data from clinicians with the aim of understanding:

i. their endorsement of certain patient experiences during or after a therapy session as potential signs of retraumatisation (SoR; e.g. increased PTSD symptoms, increase in behaviours relating to risk to self); and whether there was a difference in total endorsement of SoR between those clinicians who had, and had not, reported witnessing retraumatisation;

ii. the reported incidences of retraumatisation based on a specified definition i.e. the pooled proportion of patients with PTSD for whom clinicians reported that trauma-focused therapy had been harmful or had led to a worsening of PTSD symptoms;

iii. their reported use of, and confidence in, trauma-focused and non-trauma-focused therapies for PTSD; whether this was different between professional groups and/or participants who had and had not reported retraumatisation, and whether there was a correlation between clinicians' highest confidence in trauma-focused or non-trauma-focused therapy (i.e. the therapy amongst trauma-focused/non-trauma-focused therapies that clinicians reported the highest confidence in out of 100) and total endorsement of SoR;

iv. their fear of retraumatisation during trauma-focused therapy for PTSD, and specifically whether there are differences in this between professional groups, participants who had and had not reported witnessing retraumatisation and/or participants who reported routinely offering and using trauma-focused therapies; and

v. whether there was a correlation between fear of retraumatisation and a) total endorsement of SoR and/or b) highest confidence in trauma-focused therapy.

1.2 Method

1.2.1 Ethical approval

All procedures were approved by the University of East Anglia's (UEA) Faculty of Medicine and Health Sciences Ethics Committee (ETH2223-1282; Appendix K).

1.2.2 Participants

We recruited mental health professionals (qualified or in training) who offered psychological therapy for people with PTSD within the UK National Health Service (NHS). People were not eligible to participate if they only provided psychological therapy privately, worked outside the UK or were a Trainee Clinical Psychologist in the UEA 2021 cohort.

Recruitment occurred between February 2nd 2023, and June 30th 2023, via social media and professional bodies (see Appendix L for details). A copy of the materials used for recruitment via social media can be found in Appendix M and via professional bodies in Appendix N.

1.2.3 Procedures

This study used a cross-sectional online survey design. See Appendix L for a flowchart of the study procedures.

Participants were provided with a participant information page, which provided information describing the purpose of the study and ethical considerations (including contact

details for the research team and complaints, data storage, confidentiality and potential risks and benefits of participation; see Appendix O). Participants then confirmed their informed consent with a consent statement (Appendix P). This is consistent with guidance regarding proportionate consent for online surveys (Health Research Authority, 2017).

The survey, including the potential SoR used, was developed in collaboration with three experts in the field of PTSD. These experts (GB, NG and SEL) were recruited through the senior author's contacts (all experts contacted agreed to be involved). The first and senior author met with the experts to develop ideas for the survey before a draft had been developed, and then the experts provided written comments on drafts of the survey, which were used to develop the survey. A copy of the survey can be found in Appendix Q. On completion of the survey, participants were provided with debrief information (Appendix R).

1.2.4 Measures

1.2.4.1 Demographic and professional background

Participants were asked to provide their age, sex, gender, ethnic group, and highest level of education based on the categories from the Office for National Statistics (2021). Participants were then asked to identify their core professional background, the number of years they had been training or qualified in this and the population(s) and setting(s) they currently worked with (participants could endorse more than one population and/or setting).

1.2.4.2 Use of, and confidence in, non-trauma-focused and trauma-focused therapies

Participants were asked which therapy modalities they routinely offered and used with people with PTSD, their confidence in delivering these (0-100%; 0%=not confident at all, 100%=extremely confident), and whether they routinely integrated therapies (yes/no). For each participant, we extracted the therapy amongst both trauma-focused and non-trauma-focused therapies that they reported the highest confidence in out of 100, and we refer to this as clinicians' highest confidence in trauma-focused or non-trauma-focused therapy (i.e. if,

amongst trauma-focused therapies, they reported 50 for PE and 80 for CT-PTSD, we extracted 80 as the highest trauma-focused therapy confidence).

1.2.4.3 Patient reactions as potential signs of retraumatisation

Participants were presented with a definition of retraumatisation ("the therapy experience as being harmful in its own right and potentially leading to a lasting worsening of PTSD symptoms") and asked to what extent 11 defined patient reactions suggested a patient is "undergoing retraumatisation," providing ratings of SoR (0-100%; 0%= does not suggest retraumatisation at all; 100%=indicative of retraumatisation). We interpreted a score of ≥50 as indicating endorsement of the reaction as a sign of retraumatisation. There was strong internal consistency between the 11 items (α=.94). We summed the scores of all 11 items for each participant, giving a score between 0 and 1100.

1.2.4.4 Witnessing retraumatisation

Participants were asked whether they had witnessed trauma-focused therapy as being "harmful in its own right or leading to a worsening of PTSD symptoms" in any of their patients in the past six months (yes/no; a score we termed "witnessed retraumatisation"), and if so, how many patients they had witnessed this in. Participants were also asked to estimate how many patients with PTSD they had treated in the previous six months using trauma-focused therapy. We used these data to determine the pooled proportion of patients for which participants reported witnessing retraumatisation during trauma-focused therapy.

1.2.4.5 Fear of retraumatisation

Participants were asked how much they worry about trauma-focused therapy being harmful in its own right (the therapy itself as harmful) or leading to a worsening of PTSD symptoms in their work with people with PTSD in general (0-100%; 0%=not worried at all; 100%=extremely worried; a score we termed "fear of retraumatisation").

1.2.5 Data analysis

Study data were cleaned, sample characteristics were summarised using descriptive statistics, and participants were categorised by the "witnessed retraumatisation" variable. Descriptive statistics calculated i) the endorsement of potential SoR, ii) the pooled proportion of patients who participants reported that trauma-focused therapy had been harmful for or led to a worsening of PTSD symptoms, and iii) the mean confidence in, and number of, different trauma-focused and non-trauma-focused therapies, and the mean of the highest rated confidence in trauma-focused and non-trauma-focused therapies.

T-tests compared participants who reported retraumatisation and those who did not on i) total endorsement of potential signs SoR, ii) confidence in, and number of, trauma-focused and non-trauma-focused therapies used for PTSD, and iii) fear of retraumatisation. T-tests were also used to compare participants who routinely used trauma-focused therapies for PTSD and those who did not on fear of retraumatisation. Three one-way ANOVAs with post-hoc tests were conducted to compare fear of retraumatisation and highest confidence in trauma-focused and non-trauma-focused therapies between professional groups. Correlations were conducted on fear of retraumatisation with i) total endorsement of SoR and ii) highest confidence in trauma-focused and non-trauma-focused therapy. Correlations were also conducted on highest confidence in trauma-focused and non-trauma-focused therapies and potential SoR, and we ran follow-up regression analyses on this with the variables i) working at a Traumatic Stress Service and ii) being in training or qualified in reported core professional background.

Anonymised study data are available on request, as is analytic code. Statistical analysis was conducted using IBM SPSS Statistics Version 28 (IBM Corp, 2021). Alpha level was set at .05 for all statistical analyses, and all significance testing was two-tailed.

1.3 Results

1.3.1 Sample characteristics

There were 348 participants (292 female, 54 male, and 2 non-binary; mean age of 35.7 years, *SD*=9.1). Most participants held a master's degree (44.8%) or doctoral degree (42.8%). White British was the most reported ethnicity (78.2%), followed by "any other White background" (12.1%). Table 1 provides an overview of the demographic information for the total sample and by professional groups.

Most participants identified their "core professional background" (even if in training) as Clinical Psychologist (173, 49.7%) or CBT Therapist (76, 21.8%). The 2023 UK National Psychological Professions Workforce Census estimated Clinical Psychologists represented 23% of psychological professionals and CBT Therapist represented 20% (NHS Benchmarking Network, 2023). The sample was also made up of Practitioner Psychologists (i.e., Counselling/Forensic/Health; *n*=18, 5.3%; Census=1.5%), Clinical Associates in Psychology (*n*=19, 5.5%; Census=2%), Adult Psychotherapists (*n*=11, 3.2%; Census=2%), Nurses (*n*=10; 2.9%; not included in Census) and professionals groups with fewer than 10 participants (e.g., Occupational Therapists, Psychiatrists, Social Workers; *n*=41, 11.8%).

Of those reporting their "core professional background" qualification status (*n*=314), 66.6% (*n*=209) were qualified, with a mean of 7.5 years (*SD*=7.3) practising since qualification; 33.4% were in training with a mean of 1.9 years (*SD*=1.4) in training.

Participants worked with a variety of populations (adult, 82.5%; older adult, 20.4%; child and adolescent, 17.8%; youth, 6.3%) and in various settings (outpatient, 66.7%; NHS Talking Therapies, 22.7%; inpatient, 14.4%; specialist trauma service, 8.1%; staff wellbeing, 4.6%; crisis, 2.0%; day patient, 2.0%) with 25.0% of participants reporting working with multiple populations and 23.0% in multiple settings.

Table 1. *Sample demographic characteristics*

Sample Demographics	Total sample		Clinical Psychologists[a]		CBT Therapists[a]		Other Professionals[a]	
	N= 348		*n*= 173		*n*= 76		*n* = 99	
	n (%)		*n* (%)		*n* (%)		*n* (%)	
Age								
18-25	23	*(6.6)*	7	*(4.1)*	0	*(0)*	16	*(16.2)*
26-35	189	*(54.3)*	100	*(57.8)*	43	*(56.5)*	46	*(46.6)*
36-45	86	*(24.7)*	40	*(23.1)*	24	*(31.6)*	22	*(22.2)*
46-55	39	*(11.2)*	22	*(12.7)*	8	*(10.5)*	9	*(9.1)*
56-65	9	*(2.6)*	3	*(1.7)*	1	*(1.3)*	5	*(5.1)*
66+	2	*(0.6)*	1	*(0.6)*	0	*(0)*	1	*(1.0)*
Gender identity								
Female	292	*(83.9)*	153	*(88.4)*	62	*(81.6)*	77	*(77.8)*
Male	54	*(15.5)*	18	*(10.4)*	14	*(18.4)*	22	*(22.2)*
Non-binary	2	*(0.6)*	2	*(1.2)*	0	*(0)*	0	*(0)*
Ethnic group								
Asian/Asian British	16	*(4.6)*	5	*(2.9)*	3	*(4.0)*	8	*(8.1)*
Black/Black British/ Caribbean/ African	4	*(1.2)*	1	*(0.6)*	1	*(1.3)*	2	*(2.0)*
Mixed/multiple ethnic groups	8	*(2.3)*	3	*(1.7)*	1	*(1.3)*	4	*(4.0)*
White British	256	*(73.6)*	129	*(74.6)*	59	*(77.6)*	68	*(68.7)*
Any other White background	58	*(16.7)*	33	*(19.1)*	11	*(14.5)*	14	*(14.1)*
Any other	6	*(1.7)*	2	*(1.2)*	1	*(1.3)*	3	*(3.0)*
Highest completed education level [b]								
Below BSc	4	*(1.2)*	0	*(0)*	0	*(0)*	4	*(4.0)*
BSc/equivalent	34	*(9.8)*	9	*(5.2)*	4	*(5.3)*	21	*(21.2)*
Certificate of Higher Education/equivalent	4	*(1.2)*	1	*(0.6)*	0	*(0)*	3	*(3.0)*
MSc/equivalent	156	*(44.8)*	29	*(16.8)*	69	*(90.8)*	58	*(58.6)*
Doctorate/equivalent	149	*(42.8)*	134	*(77.5)*	3	*(4.0)*	12	*(12.1)*

[a] Includes those in training
[b] Missing data *n*=1

1.3.2 Potential signs of retraumatisation

Table 2 shows clinicians' ratings of possible SoR, separated by in-session and after-session, ordered by the mean endorsement, and the number of participants that endorsed the item ≥50 (out of 100). The table also shows the total sum endorsement of all potential retraumatisation signs (0-1100; mean score of all ratings summed together for each participant). For the total sample, the most strongly endorsed item was an increase in behaviours relating to risk to self; this item was also the most commonly endorsed sign.

We compared participants who reported having witnessed retraumatisation and those who did not on endorsement of SoR, and these data are shown in Table 2. Participants who reported witnessing retraumatisation had a significantly higher total endorsement of SoR (*M*=469.3, *SD*=258.4) compared to those who reported not witnessing retraumatisation (*M*=300.6, *SD*=240.4; *t*(294)=4.25, *p*<.001, *d*=.69 [95% *CI* .37, 1.02]).

Table 2. *Participants' ratings of possible signs of retraumatisation*

	Total sample N = 315[a]				Reported witnessing retraumatisation N = 44[b]				Did not report witnessing retraumatisation N = 252[c]			
			Endorsing ≥ 50				*Endorsing ≥ 50*				*Endorsing ≥ 50*	
	M (/100)	(SD)	*N*	*%*	M (/100)	(SD)	*N*	*%*	M (/100)	(SD)	*N*	*%*
In a session												
Tearful	9.3	(16.1)	*11*	*3.5*	18.9	(23.8)	*4*	*9.1*	8.0	(14.1)	*7*	*2.8*
Flashback	26.6	(28.2)	*64*	*21.3*	43.0	(32.3)	*17*	*38.6*	23.2	(26.7)	*41*	*16.3*
Zoning out/dissociating	28.3	(27.2)	*67*	*20.6*	45.2	(33.1)	*21*	*47.7*	25.4	(25.7)	*44*	*17.5*
Panic attack	28.9	(28.0)	*65*	*20.3*	43.8	(32.2)	*17*	*38.6*	26.2	(26.6)	*44*	*17.5*
After a session												
Feeling more anxious	25.7	(26.4)	*66*	*21.0*	38.8	(29.1)	*16*	*36.4*	22.7	(25.3)	*43*	*17.1*

More nightmares	28.2	(27.8)	*69*	*24.1*	41.7	(28.4)	*18*	*40.9*	24.7	(26.4)	*41*	*16.3*
Feeling jumpier	28.4	(27.9)	*76*	*22.9*	40.8	(28.9)	*17*	*38.6*	25.5	(27.6)	*52*	*20.6*
More flashbacks	28.6	(28.1)	*72*	*21.9*	41.7	(31.5)	*16*	*36.4*	25.4	(27.3)	*46*	*18.3*
Increased substance use	40.4	(31.0)	*119*	*37.8*	49.3	(30.1)	*22*	*50.0*	37.1	(30.8)	*83*	*32.9*
Not attending sessions	41.5	(21.7)	*130*	*41.3*	51.3	(31.8)	*23*	*52.3*	38.4	(31.2)	*92*	*36.5*
Increase in behaviours relating to risk to self	46.9	(33.2)	*148*	*47.0*	54.9	(32.3)	*22*	*50.0*	44.2	(33.2)	*111*	*44.0*
Total (0-1100)	332.9	(247.5)	*68*[d]	*21.5*[e]	469.3	(264.8)	*19*[d]	*43.2*[e]	300.6	(243.1)	*43*[d]	*17.1*[e]

[a] Missing data (due to exiting survey before answering questions on potential signs of retraumatisation)
[b] Missing data *n*=1 (reported witnessed retraumatisation but then exited survey before questions on PSoR)
[c] Missing data *n*=12 (reported did not witness retraumatisation but then exited survey before questions on PSoR)
[d] $N \geq 550$
[e] $\% \geq 550$

1.3.3 Reported incidences of retraumatisation

Pooling all responses, of the 2,618 patients whom participants reported they had treated for PTSD in the past 6 months, participants reported that therapy had been harmful or led to a worsening of PTSD symptoms in 89 patients (3.4%). These 89 patients were reported by 42 participants (12.1%, missing data=17 including three participants who reported witnessing retraumatisation), with 24 participants reporting witnessing this in one patient, seven in two patients, five in three patients, and the remaining six participants reporting witnessing this in four or more patients.

1.3.4 Use of, and confidence in, trauma-focused and non-trauma-focused therapies

Table 3 shows confidence in trauma-focused (TF) and non-trauma-focused (non-TF) therapies, ordered by the number of participants endorsing each therapy. Participants reported routinely offering and using a mean of 2.4 (*SD*=1.5) TF therapies and 3.9 (*SD*=3.3) non-TF therapies to treat PTSD. Notably, 77.9% of participants reported routinely integrating psychological therapies.

TF-CBT was the most commonly endorsed TF therapy, with 68.7% of all participants reporting routinely offering and using it to treat PTSD. It is important to note that therapies that are considered different forms of TF-CBT were also commonly endorsed. When TF-CBT was removed as an option (due to being an umbrella term), CT-PTSD was the most commonly endorsed TF therapy (56.9% of participants). Narrative exposure therapy (NET) was the most strongly endorsed TF therapy (*M*=75.3, *SD*=13.6), and dialectical behavioural therapy (DBT) was the most strongly endorsed non-TF therapy (*M*=73.6, *SD*=10.7). However, NET and DBT were not options displayed to all participants; instead, participants endorsed these under the "other" therapy option, and they were reported by a minority of participants overall (6.3% for NET and 2.3% for DBT). When NET and TF-CBT, were removed, CT-PTSD was the most strongly endorsed TF therapy (*M*=65.6, *SD*=24.2), and when DBT was removed from the non-

TF therapies, CBT was the most strongly (*M*=66.0, *SD*=23.1) and commonly endorsed non-TF therapy (85.6% of participants). The mean confidence on the most strongly endorsed of any TF therapy options (*M*=74.6, *SD*=20.3) was similar to that of non-TF therapies (*M*=76.0, *SD*=19.3). However, when CBT was removed from the non-TF therapies, the mean confidence on the most strongly endorsed of the remaining non-TF therapies was 57.9 (*SD*=33.6).

There was no significant difference between professional groups (i.e., Clinical Psychologists vs CBT Therapists vs Other Professionals) in the highest confidence in TF ($F_{2,295}$ = 2.16, *p*=.12) or non-TF therapies ($F_{2,345}$=.85, *p*=.43; see Appendix S for all data).

We compared participants who witnessed retraumatisation and those who did not on the highest confidence in TF therapies, and this was similar between participants who witnessed retraumatisation (*M*=74.0, *SD*=17.8, *n*=37) and those who did not (*M*=76.0, *SD*=19.7, *n*=239; *t*(274)=-.58, *p*<.28, *d*=-.10). Further, there was no significant difference in the number of TF therapies endorsed between participants who witnessed retraumatisation (*M*=2.7, *SD*=2.0, *n*=45) and those who did not (*M*=2.5, *SD*=1.6, *n*=264; *t*(207)=.87, *p*< .19, *d*=.14). Highest confidence in non-TF therapies was also similar between participants who witnessed retraumatisation (*M*=67.1, *SD*=41.2, *n*= 45) and those who did not (*M*=69.3, *SD*=39.7, *n*=264; *t*(307)=-.35, *p*<.37, *d*=-.06). However, participants who witnessed retraumatisation reported offering significantly more modalities of non-TF therapies (*M*=6.8, *SD*=4.4, *n*= 43) compared to those who did not (*M*=3.5, *SD*=2.9, *n*=264; *t*(307)=5.60, *p* <.001, *d*=.90 [95% *CI* .58, 1.23]).

There was a significant negative relationship between total endorsement of potential SoR and highest confidence in TF therapies (*r*=-.25 [95% *CI* -.36, -.14]; see Table 4), i.e. endorsing more SoR was associated with poorer confidence in treating PTSD using TF therapies. However, there was no relationship between potential SoR and highest confidence in non-TF therapies (*r*=.02 [95% *CI* -.10, .13]).

Table 3. *Confidence in trauma-focused (TF) and non-trauma-focused (non-TF) therapies*

	Total sample				Reported witnessing retraumatisation				Did not report witnessing retraumatisation				Reported witnessing RT v not witnessing RT	
	N = 348				*n* = 45[c]				*n* = 264[c]					
Variable	*M*	*(SD)*	*n*	%	*M*	*(SD)*	*n*	%	*M*	*(SD)*	*n*	%	*t*	*p*
Confidence: TF														
TF-CBT[a]	68.7	(24.5)	239	68.7	67.4	(24.7)	28	62.2	70.7	(26.0)	193	73.1		
CT-PTSD	65.6	(24.2)	198	56.9	53.3	(21.4)	26	57.8	69.5	(27.5)	160	60.6		
EMDR	64.4	(29.1)	131	37.6	56.6	(30.6)	18	40.0	66.3	(33.3)	105	39.8		
Exposure	59.7	(25.0)	130	37.4	57.0	(22.4)	23	51.1	60.9	(30.9)	100	37.9		
PE	54.1	(28.0)	68	19.5	47.7	(22.5)	13	28.9	55.7	(34.8)	52	19.7		
CPT	44.8	(32.4)	48	13.8	46.9	(27.2)	15	33.3	45.1	(35.0)	32	12.1		
NET[b]	75.3	(13.6)	22	6.3	60.0	-	1	2.2	76.6	(20.2)	19	7.2		
Most strongly endorsed TF	74.6	(20.3)	298	85.6	74.0	(17.8)	37[d]	82.2	76.0	(19.7)	239[e]	90.5	-.58	<.28
N TF therapies endorsed	2.4	(1.5)	348	100	2.7	(2.0)	45	100	2.5	(1.6)	264	100	.87	<.19
N did not endorse any TF therapies			50	14.4			8	17.8			25	9.5		
Confidence: non-TF														
CBT	66.0	(23.1)	298	85.6	57.0	(26.3)	40	88.9	68.8	(23.7)	227	86.0		
CFT	58.7	(24.6)	214	61.5	51.5	(26.8)	33	73.3	60.2	(27.1)	163	61.7		
ACT	47.8	(23.6)	161	46.3	44.0	(25.0)	28	62.2	48.5	(26.3)	116	43.9		
Narrative	51.9	(26.3)	109	31.3	52.0	(32.9)	23	51.1	52.2	(27.7)	73	27.7		
MBT	47.5	(29.5)	95	27.3	42.0	(25.3)	23	51.1	48.8	(33.5)	62	23.5		
Group therapy	54.0	(26.2)	74	21.3	46.9	(29.6)	20	44.4	57.5	(33.3)	47	17.8		
Person-centred	60.9	(29.3)	72	20.7	61.0	(26.3)	17	37.8	61.1	(36.8)	50	18.9		

CAT	42.1	(27.7)	73	21.0	35.0	(25.5)	17	37.8	47.2	(32.1)	47	17.8		
Family therapy	45.7	(28.5)	65	18.7	46.5	(28.8)	22	48.9	45.9	(20.1)	35	13.3		
Counselling	56.8	(31.8)	61	17.5	56.2	(28.1)	18	40.0	56.5	(38.0)	35	13.3		
Art therapy	39.2	(31.4)	28	8.0	43.5	(28.4)	13	28.9	37.9	(29.2)	14	5.3		
Psychodynamic	37.5	(27.3)	56	16.1	43.4	(24.6)	17	37.8	36.9	(29.0)	34	12.9		
Music therapy	45.4	(34.5)	21	6.0	52.2	(32.2)	10	22.2	43.0	(30.9)	10	3.8		
Drama therapy	42.1	(35.4)	21	6.0	41.5	(29.9)	8	17.8	45.8	(33.3)	12	4.5		
DBT[b]	73.6	(10.7)	8	2.3	70.0	(17.8)	3	6.7	75.8	(10.4)	5	1.9		
Most strongly endorsed non-TF	76.0	(19.3)	329	94.5	74.8	(25.1)	43	95.6	76.6	(24.0)	253	95.8	-.35	<.37
N non-TF therapies endorsed	3.9	(3.3)	348	100	6.8	(4.4)	43	95.6	3.5	(3.1)	264	100	5.60	<.001
N did not endorse any non-TF therapies			19	5.5			2	4.4			11	4.2		

Note. Percentages are calculated excluding missing data. We did not define the therapy modalities. ACT = Acceptance and Commitment Therapy; CAT = Cognitive Analytic Therapy; CBT = Cognitive Behavioural Therapy; CFT = Compassion Focused Therapy; CPT = Cognitive Processing Therapy; CT-PTSD = Cognitive Therapy for PTSD (a memory focused type of TF-CBT); DBT = Dialectic Behavior Therapy; EMDR = Eye Movement Desensitization and Reprocessing; MBT = Mentalization Based Therapy; NET = Narrative Exposure Therapy; non-TF = non-trauma-focused; PE = Prolonged Exposure; TF = trauma-focused.

[a] TF-CBT is an umbrella term used for interventions including CPT, CT- PTSD, NET, and PE.
[b] NET and DBT were added as frequently endorsed by participants as 'other' therapy.
[c] Missing data *n*=39 (*n* exited survey early=13, *n* reported no PTSD patients in past 6 months=26).
[d] Of the 45 participants who reported they did witness TF therapy as harmful in the prior 6 months, *n*=8 reported to not routinely offer or use any TF therapy modalities listed on the survey.
[e] Of the 264 participants who reported they did not witness TF therapy as harmful in the prior 6 months, note that *n*=25 reported to not routinely offer or use any TF therapy modalities listed on the survey.

Table 4. *Correlates of confidence in trauma-focused and non-trauma focused therapies*

	Correlation, Pearson's *r* (*n*) [95% *CI*]	
	Fear of retraumatisation	Total endorsement of SoR
Highest confidence in TF therapy[a]	-.28*** (289) [-.38, -.17]	-.25*** (273) [-.36, -.14]
Highest confidence in non-TF therapy[b]	-.09 (316) [-.20, .02]	.02 (298) [-.10, .13]
Fear of retraumatisation	-	.59*** (316) [.51, .66]
Total endorsement of SoR	-	-

* $p < .05$; ** $p < .01$; ***$p < .001$

[a] Uses the highest score endorsed by the participant for any of the trauma-focused therapies.

[b] Uses the highest score endorsed by the participant for any of the non-trauma-focused therapies.

1.3.5 Fear of retraumatisation during trauma-focused therapy for PTSD

The sample mean fear of retraumatisation was 30.3 (*N*=335, *SD*=23.4); 78 participants (23.3%) reported a fear of retraumatisation equal to or over 50 (out of 100). There was a main effect of profession on fear of retraumatisation ($F_{2,332}$=5.99, *p*=.003, partial η^2 = .035 [95% *CI* .005, .078]); post-hoc tests revealed that CBT therapists (*M*=23.2, *SD*=21.6, *n*=74) had a significantly lower fear of retraumatisation than "other professionals" (*M*=35.5, *SD*=26.0, *n*=95). Clinical Psychologists (*M*=30.5, *SD*=21.8, *n*=166) did not differ from the other groups.

There was a significant positive correlation between fear of retraumatisation and total endorsement of SoR (*r*=.59 [95% *CI* .51, .66]; see Table 4). Participants who witnessed retraumatisation had a significantly higher mean fear of retraumatisation (*M*=47.4, *SD*=25.9, *n*=45) compared to those who did not having witnessed retraumatisation (*M*=26.7, *SD*=21.4, *n*=264; *t*(307)=5.82, *p*< .001, *d*=.94 [95% *CI* .61, 1.26]).

Participants who routinely offer and use TF therapies for PTSD had a significantly lower mean fear of retraumatisation (*M*=29.1, *SD*=23.0, *N*=289) compared to participants who do not routinely offer and use TF therapies for PTSD (*M*=37.8, *SD*=24.3, *N*=46; *t*(333)=-2.36, *p*<.019, *d*=.37 [95% *CI* .69, .06]). Taking only participants who routinely use TF therapies, there was a significant negative correlation between fear of retraumatisation and the highest confidence in TF therapy (*r*=-.28 [95% *CI* -.38, -.17]; see Table 4); follow-up regression analyses confirmed that this relationship remained even when controlling for working in a Traumatic Stress Service (*p*=.93) or being in training vs qualified in core professional background (*p*=.34).

1.4 Discussion

This study aimed to gain an understanding of the concept of retraumatisation, estimate its prevalence through a specified definition and relate this to clinicians' confidence in trauma-focused psychological interventions.

1.4.1 How clinicians recognise retraumatisation

Regarding the potential SoR, items relating to increased risk to self and decreased therapy attendance had the highest mean endorsement (at least 40 out of 100) and were rated as more indicative of retraumatisation than increased PTSD symptoms during and after sessions. However, there was considerable variation, and therefore little agreement, in the endorsement of each item and the total endorsement of potential SoR. For example, although the mean for having a flashback or zoning out in a session was low at 26.6 and 28.3, respectively, over 20% of participants endorsed these items more than 50 out of 100. Since avoidance of trauma-related reminders is a key symptom of PTSD, perhaps it seems logical to some clinicians that patients experience an increase in symptoms when processing trauma memories, whereas for others, perhaps this is interpreted as a harmful effect of therapy. Such data suggest that clinicians do not have a shared view of retraumatisation in practice.

These results question whether retraumatisation is a valid and useful construct and, as a minimum, highlight a need for a better working definition of retraumatisation, with consideration of the perspectives of people who have received trauma-focused therapy.

1.4.2 Prevalence of retraumatisation

Using the definition of therapy as harmful or leading to a worsening of PTSD symptoms, participants reported retraumatisation in a small minority of patients (3.4%), and these cases were reported by about 12% of participants, i.e. the overwhelming majority did *not* report witnessing trauma-focused therapy as harmful in the past six months. It is noteworthy that participants who reported retraumatisation had a higher total endorsement of SoR compared to those who did not (d=.69). This could suggest that those who reported witnessing retraumatisation had a lower threshold for what they considered to be retraumatisation. This suggestion could be further supported by the strong positive correlation between fear of retraumatisation and the total endorsement of retraumatisation signs (r=.59) and the finding

that participants who reported retraumatisation had a significantly greater fear of retraumatisation (*d*=.94). However, it could also be that all these constructs are associated with a third, unmeasured, characteristic (e.g. clinician neuroticism).

1.4.3 Clinician confidence

Clinicians' highest confidence in trauma-focused therapy (using their most strongly endorsed) was approximately 75, but this was accompanied by a large amount of variance (*SD*=20.3). A significant minority of participants (14.4%) did not endorse using any trauma-focused therapy. Clinician confidence was related in various respects to how they understood retraumatisation; there was a significant negative correlation between participants' highest reported confidence in trauma-focused therapy and total endorsement of potential SoR (*r*=-.25) and fear of retraumatisation (*r*=-.28). Although the mean fear of retraumatisation was relatively low (30 out of 100), it was characterised by considerable variation (*SD*=23.4), and over 20% of participants reported a fear of retraumatisation above or equal to 50.

Although there was no significant difference in the number of trauma-focused therapies offered by participants who reported they had and had not witnessed retraumatisation, those reported retraumatisation offered significantly more types of *non-trauma-focused* therapies (6.8) compared to those who reported they did not witness retraumatisation (3.5, *d*= .90). This could suggest that clinicians who report witnessing retraumatisation are more frequently using non-trauma-focused therapies, potentially as an adjunct to or instead of trauma-focused therapies.

1.4.4 Clinical implications

The data reported here suggest that retraumatisation is not common during trauma-focused treatments for PTSD. Further, there was some evidence to suggest that even when it is reported, it may, in part, reflect different clinician interpretations of experiences during PTSD treatment (i.e. the threshold for what might be considered retraumatisation was lower for

participants who reported retraumatisation than those who denied observing retraumatisation). There was a large degree of variation in confidence in the trauma-focused therapies recommended by clinical guidelines (e.g. NICE, 2018), suggesting that clinician training to increase confidence in trauma-focused therapies may be warranted. Literature on adverse reactions to therapies has recommended that clinician training should address adverse effects in therapy (Castonguay et al., 2010), and the variation in the endorsement of items relating to potential SoR suggests that training should also include information on common patient reactions during trauma-focused treatment. However, our data suggest that specifically referring to "retraumatisation" may be unhelpful, given the lack of consistency in understanding what it looks like in clinical practice. Other terms may be more useful and potentially less emotive. For example, the incidences of harm criteria outlined by Hoppen, Lindermann & Morina (Hoppen et al., 2022) consisting of i) PTSD symptoms exacerbation, ii) aversive but non-lethal events (e.g. increased severity of a comorbid mental health disorder) and iii) more “serious” potentially lethal events (e.g. acute suicidality).

A variety of therapies were reported as being used with patients with PTSD, with a mean of 2.4 trauma-focused and 3.9 non-trauma-focused types of therapy. This study suggests that trauma-focused interventions for PTSD that are recommended by NICE (2018) for healthcare in England are being implemented in the NHS but that other, non-trauma-focused interventions are being routinely used to treat PTSD as well. With the finding that 77.9% of participants routinely integrate therapies, there is a need to study this aspect of care with people with PTSD. While the use of a range of approaches may reflect a willingness to address a variety of needs (e.g. a comorbid condition), there is also the possibility that it reflects another variable e.g. a lack of confidence or competence to deliver trauma-focused therapies, therapist avoidance or clinician personal characteristics (e.g. heightened neuroticism or conscientiousness).

1.4.5 Study strengths, limitations, and future directions

We cannot draw conclusions about the direction of the effects observed in this study, i.e. we cannot establish whether witnessing retraumatisation increases fear of retraumatisation, fear of retraumatisation makes it more likely for a clinician to interpret a reaction as retraumatisation, or whether another factor (e.g. tendency to use or integrate certain therapies, or clinician characteristics) explains both observing and fearing retraumatisation. Similarly, witnessing perceived retraumatisation could make clinicians more aware of the related patient reactions and, therefore, endorse them more highly.

The study results may be influenced by response bias and self-report bias and may not provide an accurate representation of practice. This could be reflected in the finding that the rate of 3.4% found in this study of therapy as being harmful or leading to a worsening of PTSD symptoms is lower than the reliable deterioration rate (7.1%) reported in NHS Talking Therapies for PTSD (NHS Digital, 2022). It is also important to note that "confidence" in a therapy does not necessarily translate into competence or effective implementation. In future research, it would be useful to understand clinician confidence and competence for PTSD in relation to other mental health disorders.

In terms of participants, since clinicians were not randomly selected to participate, there may be a response bias towards the types of clinicians likely to participate. Further, the results may not be generalisable as all the participants worked in the NHS. However, a strength is the representation of professions. Although Clinical Psychologists consisted of roughly 50% of participants and only 23% of psychological professionals in the 2023 Workforce Census (NHS Benchmarking Network, 2023), Psychological Wellbeing Practitioners represented 21% of psychological professionals, and this role does not treat PTSD, potentially explaining the higher representation of Clinical Psychologists.

Lastly, this study only surveyed clinicians, yet the views of people with PTSD who have received trauma-focused therapy for PTSD are key. This is especially important since research has found that therapists can make poor clinical judgments as to whether patients experience adverse effects of therapy (Hatfield et al., 2010). Qualitative research with clinicians and people with PTSD who have received trauma-focused therapy would be useful to explore whether there is a difference between potential adverse effects of therapy and retraumatisation. In particular, research into experiences in trauma-focused treatments that are difficult but potentially ultimately beneficial and whether this is viewed as acceptable by people with PTSD. Alongside this, since there is little reporting on adverse impacts during RCTs of psychological therapies (Nutt & Sharpe, 2008), quantitative analysis of routine service data or available data from RCTs could be useful to further define these categories.

1.4.6 Conclusion

This study highlights the need for more research to clarify specifically what retraumatisation is as a concept and suggests that, currently, there is not a shared view as to how retraumatisation is understood in practice. We found that confidence in trauma-focused treatments for PTSD is generally high but that there is also a high degree of variation and that fear of retraumatisation is present for at least a significant minority of clinicians. We found that participants reported trauma-focused treatment as harmful or leading to a worsening of PTSD symptoms in a small minority of cases (3.4%). However, we highlight that the reporting of this may be linked to the interpretation of reactions that could be viewed as SoR.

Author contributions

Lucy Purnell: Conceptualisation, methodology, formal analysis, investigation, writing – original draft, visualization, project administration, funding acquisition. **Kenny Chiu:** Writing – review & editing, writing – review & editing, project administration. **Gita Bhutani:** Methodology, writing – review & editing. **Nick Grey:** Methodology, writing – review & editing. **Sharif El-Leithy:** Methodology, writing – review & editing. **Richard Meiser-Stedman:** Conceptualisation, methodology, formal analysis, investigation, writing – review & editing, visualization, project administration, funding acquisition.

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Chapter Five: Extended Method

Extended method: systematic review

Search strategy

Although we only included RCT research, we acknowledged that some RCTs might not be published in peer-reviewed papers and so we used PTSDpubs as a method of searching grey literature as this database includes books, reports, newsletters, and dissertations as well as peer-reviewed papers.

Eligibility criteria

We formulated the first research question describing the population, intervention, comparison, outcome, and study design (PICOS) as follows: in adults with PTSD (P), are trauma-focused psychological interventions (I), compared with non-trauma-focused active interventions (interventions that did not target trauma and/or PTSD symptoms e.g. present-centred therapy, applied relaxation) or waitlist (passive) conditions (C), associated with a reduction in PTSD symptoms at mid-treatment (O) in RCTs (S). As secondary research questions, we changed the outcomes to PTSD symptoms at post-treatment and depression symptoms at mid- and post-treatment.

We used broad inclusion criteria as, from scoping searches, we expected a relatively low number of studies to report mid-treatment PTSD symptoms.

Data extraction

During the full-text screening process, we contacted corresponding authors. We have provided detail of correspondence in Appendix T.

We converted any data into the necessary format for analysis i.e., standard error or confidence intervals into standard deviations.

Extended method: empirical study

Survey pilot

Prior to the survey being distributed via social media and professional bodies, a pilot version was sent out to colleagues of the research team working with people with PTSD to obtain feedback on the appropriateness of the included questions and on the ease of using the survey. We amended the survey based on this feedback.

Expert panel

As well as collaborating in the design of the survey, the experts also provided comments on the manuscript and so are included as authors of this paper.

Survey case vignettes

The survey included case vignettes. This thesis does not report on the data from the case vignettes. For totality and clarity in understanding the survey, the case vignettes are presented in Appendix U. There were four different case vignettes for part one of the survey, with four variables: physical assault in childhood or adulthood and a history of emotional abuse or no significant trauma history. The survey platform automatically randomly assigned participants to one of the four case vignettes. All participants were shown the same vignette for part two. The data from the vignettes will be analysed and written up as a separate submission for publication.

Measures

Demographic and professional background

There are 12 specific professions that are formally recognised within formal NHS leadership structures (Psychological Professions Network, 2022). We included these professions, as well as other professions that can offer psychological therapy within the

National Health Service (Mental Health Practitioner, Nurse, Occupational Therapist, Psychiatrist, Social Worker), in the available options for “core professional background.”

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Chapter Six: Extended Discussion and Critical Evaluation

Extended discussion and critical evaluation

This chapter summarises findings from the presented systematic review and meta-analysis and the empirical study in relation to literature in the field. This chapter also presents further discussion of the strengths and limitations of the research, clinical implications and directions for future research.

Overview of systematic review results

Mid-treatment PTSD symptoms

This is the first meta-analysis of mid-treatment PTSD symptoms, and we found a statistically non-significant negative effect size (as the 95% CI crossed zero; g = -.16) when comparing trauma-focused interventions for PTSD to all control conditions at mid-treatment. Although non-significant, this analysis found no evidence of PTSD symptom exacerbation at mid-treatment in trauma-focused psychological interventions compared to control group, and in fact the effect size favoured trauma-focused psychological therapies.

When we compared trauma-focused interventions to only passive control conditions at mid-treatment for PTSD symptoms, a small, statistically significant effect size was produced (g = -.32). This supports the suggestion of Jayawickonreme and colleagues (2014) that trauma-focused treatments reduce the risk of symptom exacerbation relative to not receiving treatment.

Our analysis identified an outlier (Zaccari et al., 2022). When we removed this outlier, the effect size increased and became statistically significant favouring trauma-focused psychological therapies (g = -.19). Zaccari and colleagues' (2022) study compared a novel, non-trauma-focused group (trauma-sensitive yoga) to an established trauma-focused condition (CPT). It should be noted that there was a difference of 11.7 in Clinician-Administered PTSD Scale (CAPS) scores at baseline between the CPT group (79.4) and yoga group (67.7), which is not accounted for in the difference of 28.8 between the groups at mid-treatment. This study

was a pilot to the 2023 study included in this review by Zaccari and colleagues. The larger 2023 study reported an effect size of -.24 at mid-treatment on the CAPS in favour of the trauma-sensitive yoga group (Zaccari et al., 2023), but this study was not identified as an outlier in our analysis.

A sensitivity analysis with only high quality studies produced a small statistically significant effect size (g = -.25), suggesting that not only is there no evidence for PTSD symptom exacerbation, but there is some evidence of PTSD symptom relief in trauma-focused psychological therapies compared to control groups at mid-treatment in high quality studies.

In all analyses of mid-treatment PTSD symptoms, the prediction interval was non-significant, and so in future studies the effect sizes observed may not be replicated.

Post-treatment PTSD symptoms

We found a medium effect size on PTSD symptoms at post-treatment when we compared trauma-focused interventions to all control conditions (g = -.57) and a large effect when we only compared to studies with a passive control (g = -1.0). A large effect size at post-treatment has been found in previous meta-analyses (e.g. Mavranezouli et al., 2020). Crucially, these findings suggest that trauma-focused therapies yielded significant improvements compared to control conditions (regardless of which type of control) with respect to PTSD.

Depression symptoms at mid- and post-treatment

In terms of depression symptoms, we found a statistically significant small effect size when we compared trauma-focused interventions to control conditions at mid-treatment (g = -.23) and post-treatment (g = -.45), and therefore no evidence for exacerbation at mid- or post-treatment in trauma-focused interventions compared to controls. This meta-analysis supports other research that suggests that trauma-focused psychological treatments for PTSD impacts

on other aspects of mental health (e.g. Jayawickreme et al., 2014; Resick, Nishith, Weaver, Astin, & Feue, 2002).

Overview of empirical study results

How clinicians recognise retraumatisation

Within the 348 clinicians who completed the survey, there was high variation, and therefore little agreement, in the endorsement of potential signs of retraumatisation. Items relating to increased risk to self and decreased therapy attendance were endorsed most strongly (at least 40 out of 100) and rated as more indicative of retraumatisation than increased PTSD symptoms during and after sessions. We found a strong positive correlation between the total endorsement of retraumatisation signs and fear of retraumatisation (r=.59).

The high variation found questions the usefulness of the term "retraumatisation," with it potentially being too imprecise. In the context of literature on the adverse effects of therapy Crawford, Parry and Duggan (2016) recognised the need for the standardisation of terminology regarding adverse effects to therapy and made three recommendations: i) adverse events which are related to, or caused by, therapy, ii) clinically significant deterioration (from outcome measures or clinician observation) and iii) patient-experienced harm. Specific to PTSD, a recent meta-analysis on the safety of interventions for PTSD used the following criteria to define adverse effects of therapy: i) PTSD symptom exacerbation, ii) aversive but non-lethal events (e.g. increased severity of comorbid mental health) and iii) more "serious" potentially lethal events (e.g. acute suicidality; Hoppen, Lindemann & Morina, 2022).

Prevalence of retraumatisation

Trauma-focused therapy was reported by clinicians as harmful or leading to a worsening of PTSD symptoms in 3.4% of patients, which is lower than the reliable deterioration rate reported in the NHS Talking Therapies (formerly known as Improving

Access to Psychological Therapies [IAPT]) 2021-22 report for both PTSD (7.1%) and for all conditions treated (5.8%; NHS Digital, 2022). Reliable deterioration is defined as an increase in the depression or disorder-specific measure greater than the reliable change threshold or no decrease in the depression or disorder-specific measure greater than the reliable change threshold from the first to the final recorded score (NHS Digital, 2021). During therapy, research suggests that approximately 20% of patients experience temporary symptom worsening (Foa, Zoellner, Feeny, Hembree & Alvarez-Conrad, 2002; Larsen, Wiltsey Stirman, Smith & Resick, 2016) and that, potentially, a small percentage experience symptom worsening from the first treatment session and the final session of trauma-focused therapy (e.g., 1.2% in Ehlers et al., 2013). This is reflected in qualitative research that found that while one theme of the experience of reliving during trauma-focused therapy involved pain, another described the positive change from reliving (Shearing et al., 2011). When Hoppen, Lindemann & Morina (2022) broadened out the definition of harm during therapy to include not only PTSD symptom exacerbation but also aversive non-lethal events and more serious potentially lethal events, only a minority of patients experienced harm during treatment or shortly after the end of treatment (0-5% for most of the analyses).

It is important to note that the outcome of trauma-focused therapy as harmful or leading to a worsening of PTSD symptoms was reported by only 12.1% of participants, meaning that the overwhelming majority did not report witnessing trauma-focused therapy as harmful in the past six months. These participants reported significantly higher total endorsement of signs of retraumatisation ($p < .001$, d=.69) and greater fear of retraumatisation ($p < .001$, d=.94). This could suggest that the reporting of therapy as harmful or leading to a worsening of PTSD symptoms was linked with clinicians' understanding of retraumatisation.

Clinician confidence

The mean of the most strongly endorsed of the selection of trauma-focused and non-trauma-focused therapies for PTSD were similarly endorsed in terms of confidence (both more than 70/100). A significant minority of participants (14.4%) did not endorse routinely using any trauma-focused therapy. Although there was no significant difference in the number of trauma-focused therapies offered by participants who had and had not witnessed retraumatisation, those who witnessed retraumatisation offered significantly more types of *non-trauma-focused* therapies (6.8) compared to those who reported they did not witness retraumatisation (3.5, $d = .90$)

Clinician confidence in trauma-focused therapies was related in various respects to how they understood retraumatisation; there was a significant negative correlation between participants' highest reported confidence in trauma-focused therapy and total endorsement of potential signs of retraumatisation (r=-.25) and fear of retraumatisation (r=-.28). Although the mean fear of retraumatisation was relatively low at 30 (/100), it was characterised by considerable variation (SD=23.4), and over 20% of participants reported a fear of retraumatisation at 50 or above. Literature has suggested that in response to these fears, clinicians might avoid or delay actively working with trauma memories (Murray & El-Leithy, 2022) or be overly cautious in how they deliver therapy (Deacon et al., 2013). Therefore, clinicians who experience a fear of retraumatisation might not deliver optimal trauma-focused therapy for PTSD.

Critical evaluation

Strengths and limitations of systematic review

Although we only included RCTs, and there is clinician concern that RCTs do not generalise to the clinical practice (Ehlers et al., 2013), the results of our study have been reflected in non-RCT research with populations that are often viewed as populations that RCT

data are not applicable to. For example, a study using NET with refugee populations (Kaltenbach et al., 2020) and a study using CPT in areas of ongoing conflict and violence (Kaysen et al., 2020) reported a significant reduction in self-rated PTSD symptoms over time in treatment. Further, Kaltenbach and colleagues (2020) noted that any symptom increases were temporary and seemed to be related to stressful life events co-occurring with treatment.

It is important to note that the literature on trauma-focused interventions for PTSD is vast, yet our review only included 23 studies due to a lack of reporting on mid-treatment PTSD symptoms. Therefore, the studies included may not be representative of PTSD symptom trajectories in all studies on trauma-focused interventions for PTSD. Further, a limitation of using mid-treatment measures is that it is possible that there were participants in studies who had dropped out of treatment before mid-treatment who had experienced symptom exacerbation. This suggestion could be supported by research by Thompson-Hollands, Lunney, Sloan, Wiltsey Stirman, and Schnurr (2023) that found that the highest risk for dropout in PE corresponds to when imaginal exposure commences (however, dropout does not necessarily indicate symptom exacerbation).

In terms of the methods used, we pre-registered this review with PROSPERO, which aims to increase transparency and reduce bias (Stewart, Moher & Shekelle, 2012), and we adhered to the updated PRISMA guidance to ensure we reported the necessary information in the paper (Page et al., 2021). We used deliberately broad search criteria, conducted our search on four databases, searched included studies' reference lists and searched papers from other relevant publications and meta-analyses. We, therefore, conducted an extensive search.

In terms of the included studies, firstly, although reporting on sample ethnicity used inconsistent categories and was not reported by all studies, ethnic diversity was present across study samples, which increased the generalisability of our findings. Secondly, approximately

half of the trials (*k* = 12; 52.2%) used the CAPS to measure PTSD symptoms at mid-treatment, which is a clinician interview that has been widely validated (Weathers et al., 2018). We chose to prioritise collecting clinician-rated measures over self-report since the CAPS is recognised in research as the "gold standard" measure of PTSD (Weathers et al., 2018). The majority of the remaining studies (*k* = 6) used the PCL, which is a frequently used self-report measure of PTSD symptoms that has good psychometric properties (Blanchard, Jones-Alexander, Buckley & Forneris, 1996). Therefore, the measures used to assess PTSD symptoms had face validity to draw conclusions from in this meta-analysis. Thirdly, it was a strength of this review that study quality across trials was high. However, although it is a strength in terms of trial quality, in 16 of the included studies, therapists were trained in the specific trauma-focused intervention manual/protocol, which might not be representative of clinical practice.

Strengths and limitations of empirical study

As with all correlation analyses, we cannot establish a causal relationship between observing and fearing retraumatisation i.e. we cannot establish whether witnessing retraumatisation increases fear of retraumatisation, fear of retraumatisation makes it more likely for a clinician to interpret a reaction as retraumatisation, or whether another factor (e.g. tendency to use or integrate certain therapies or clinician characteristics) explains both observing and fearing signs of retraumatisation. Therefore, we have been tentative in the conclusions of this study.

There was a large degree of variation in the extent to which participants viewed certain patient behaviours as indicative of retraumatisation which could impact the other study data. For example, if a clinician interprets transient distress and/or an increase in PTSD symptoms as signs of retraumatisation, they may then be more likely to endorse having witnessed harm in therapy and then feel less confident or willing to use trauma-focused therapies.

The study results may be influenced by the recruitment process as for clinicians to have been advertised to take part in the study, they had to have been active on social media or part of professional bodies. Further, self-selection also might have influenced the results in the type of clinician who chose to take part; for example, potentially, clinicians who are more interested, or confident, in PTSD treatment took part in the study. Therefore, the clinicians who participated in this study may not be representative of NHS clinicians providing psychological therapy more generally. However, a strength is the representation of professions. Although Clinical Psychologists consisted of roughly 50% of participants and only 23% of psychological professionals in the Census (NHS Benchmarking Network, 2023), Psychological Wellbeing Practitioners represented 21% of psychological professionals in the Census, and this role does not treat PTSD, potentially explaining the higher representation of Clinical Psychologists.

Response bias could mean that clinicians may not have provided an accurate representation of practice. This could be reflected in the finding that the rate of 3.4% found in this study of therapy as being harmful or leading to a worsening of PTSD symptoms is lower than the reliable deterioration rate reported in the NHS Talking Therapies for PTSD (7.1%; NHS Digital, 2022). However, we tried to reduce response bias by not directly asking participants how many patients they had witnessed retraumatisation in; instead, we asked participants how many patients with PTSD they had worked with in the past 6 months, then whether they had witnessed therapy as being harmful or leading to a worsening of PTSD symptoms (yes/no) and if yes, how many patients they had witnessed this in. Another potential factor influencing the difference between the rate of harm we found and the rate in the NHS Talking Therapies report could be that when asking whether participants had witnessed therapy as being harmful or leading to a worsening of PTSD symptoms, we did not specify whether

this was during or at the end of treatment. This could have been useful data to allow for more meaningful comparisons to the NHS Talking Therapies data.

Clinical implications

Clinical implications of systematic review

The finding that the effect size increased from mid- to post-treatment when comparing trauma-focused interventions to control conditions suggests that a full course of treatment is necessary to continue to reduce PTSD symptoms from mid-treatment. This suggestion is further supported by an analysis of pooled data from four RCTs of CPT in which 29% of the sample were classified as "delayed responders," meaning that although they had not shown a reliable decrease in PTSD symptoms by mid-treatment, they showed a reliable decrease by post-treatment (Nixon et al., 2021). The authors of this analysis argue that if clinicians had decided to stop or change the treatment approach at mid-treatment, patients would have been denied a course of therapy that would have led to their recovery.

It has been suggested that direct trauma processing is not necessary to reduce PTSD symptoms. For example, an RCT of interpersonal psychotherapy (IPT; non-trauma-focused intervention) versus prolonged exposure (PE; trauma-focused intervention) found IPT to be non-inferior to PE in terms of PTSD symptoms and concluded that trauma memory processing is not necessary in the treatment of PTSD (Markowitz et al., 2015). However, our meta-analysis suggests that trauma-focused interventions have a greater effect on reducing PTSD symptoms at post-treatment compared to active control groups (g = -.36).

We did not explore the impact of co-morbidity in the included studies, apart from running a sensitivity analysis with studies that treated co-occurring substance/alcohol misuse. Burger and colleagues (2023) found that when PE and EMDR were delivered to patients with comorbid PTSD and psychosis, roughly one-third of participants experienced PTSD symptom

exacerbation during the first four sessions, but this was not significantly related to post-treatment outcomes. Therefore, potentially this systematic review should not be generalised to populations with PTSD and other diagnosed mental health co-morbidities.

Clinical implications of empirical study

Working clinically with the potential for harm

This study found the reported incidence of trauma-focused therapy as harmful or leading to a worsening of PTSD symptoms to be low, and this is supported by a large meta-analysis of harm during therapy conducted by Hoppen, Lindemann & Morina (2022). Further, there was some evidence in this study to suggest that even when harm is reported, it may partly reflect clinician interpretations of experiences during PTSD treatment (i.e. their threshold for what might be retraumatisation was lower than for clinicians who did not witness retraumatisation). However, increases in distress and adverse events are of significant concern in clinical practice, even when they occur at low rates. A recent study of TF-CBT in youth monitored distress, self-harm, and suicidal ideation or behaviour throughout treatment (Peters et al., 2022). This study found that across the 279 sessions of TF-CBT, there were 16 incidents of elevated distress (from seven of the 20 participants) and 15 incidents of self-harm (from seven participants). Importantly, throughout treatment, there was a decline in self-reported distress levels, and even when distress was highest (during the trauma narration phase), there was no corresponding increase in self-harm or suicidal ideation/behaviour. Further, although 11 participants reported suicidal ideation at baseline, only one reported suicidal ideation during treatment, and no participants developed an onset of suicidal ideation during treatment. The authors argue that the TF-CBT model offers a structured approach to safety planning regarding distress, self-harm, and suicidality. Therefore, in terms of clinical implications, although this study and other research report low rates of harm from trauma-focused therapy, the safety of patients is

paramount and must be considered throughout treatment and in supervision, especially since research has noted that clinicians may not use supervision to discuss deterioration in patients (Hardy et al., 2019). Further, although the rates of harm are low and less common than the positive effects of therapy, the process of informed consent means that clinicians should consider both outcomes before commencing trauma-focused therapy with patients.

Confidence in trauma-focused therapies and training

There was a large degree of variation in confidence in trauma-focused therapies recommended by clinical guidelines (National Institute for Health and Care Excellence [NICE], 2018), with a significant minority of participants (14.4%) not endorsing routinely using any trauma-focused therapy. Since previous research has found that clinician confidence in treating children with PTSD is associated with training (Finch, Ford, Lombardo & Meiser-Stedman, 2020) and that training in TF-CBT appears to increase self-rated and supervisor-rated competence (Murray, 2017), clinician training to increase confidence in trauma-focused therapies may be warranted. Literature on adverse reactions to therapies, has recommended that clinician training should address potential adverse effects of therapy (Castonguay, Boswell, Constantino, Goldfried & Hill, 2010). However, training needs to be thoughtfully considered, as highlighted by a study by Couineau and Forbes (2011). In this study, training and support strategies with the aim of increasing the use of trauma-focused therapies for PTSD were implemented across community mental health settings in Australia. The interventions were assessed using clinician surveys and evaluations of clinicians' treatment plans for patients with PTSD. At baseline, the study found that a lack of skills and confidence and negative beliefs about potential adverse effects were identified as significant barriers to offering trauma-focused interventions, which is in line with other surveys (e.g. Becker, Zayfert, & Anderson, 2004). After the training, there was a reduction in participants' perceived barrier of a lack of

confidence and skills; however, the fear that patients would experience adverse effects remained high (although lower than at baseline), despite potential adverse effects of trauma-focused interventions being addressed during the training and in follow-up sessions. The authors, therefore, highlighted the difficulty in changing attitudes to treatment modalities. In thinking about how training could be useful, potentially training needs to not only name potential adverse effects but also include information on common patient reactions during PTSD treatment and research on incidences of harm (e.g. Hoppen, Lindemann and Morina, 2022) and potentially how to work therapeutically with this. Hayes and colleagues (2007) suggested from research on depression that temporary symptom exacerbation could be a sign of targeting the necessary therapeutic work and should not be seen as problematic. In terms of PTSD, since avoidance of trauma-related reminders is a key criterion, it seems logical that some patients may experience an increase in symptoms when they are facilitated to process trauma memories and stop avoiding them, and clinicians need to feel prepared to work with this.

The finding that CBT therapists had a significantly lower fear of retraumatisation compared to other professionals (e.g., Occupational Therapists, Psychiatrists, Social Workers) could be viewed as evidence to suggest that training is related to clinician fear of retraumatisation as the CBT High Intensity Postgraduate Diploma covers the evidence base and treatment of PTSD (Canterbury Christ Church University, n.d.; Univeristy of Birmingham, n.d.). While it might be expected that Clinical Psychologists would also have a significantly lower fear of retraumatisation compared to other professionals, Clinical Psychology Doctorate programmes vary in teaching particular clinical groups and therapeutic modalities (British Psychological Society, 2019), which could explain why this was not observed in this study.

The use of non-trauma-focused therapies to treat PTSD

This study found that trauma-focused and non-trauma-focused therapy are routinely being used in the NHS to treat PTSD. While the use of a range of approaches may reflect a willingness to address a variety of needs (e.g. a comorbid condition), there is also the possibility that it reflects a lack of confidence or competence to deliver trauma-focused therapies, or therapist avoidance. It is debatable whether non-trauma-focused treatments should currently be offered in the NHS as this is not the recommendation of national guidance (NICE, 2018) and they are not supported by an evidence base currently, especially in comparison to the strong and large evidence base of trauma-focussed therapies (Lewis, Roberts, Andrew, Starling & Bisson, 2020; Mavranezouli et al., 2020). Evidence-based practice is important, especially in the NHS, so that the therapies offered are safe, consistent, and cost-effective (Pope, 2003).

We found that participants who witnessed retraumatisation offered significantly more modalities of non-trauma-focused therapies (6.8) compared to those who reported they did not witness retraumatisation (3.5, d=.90). This could suggest that clinicians who report witnessing retraumatisation are more frequently using non-trauma-focused therapies, potentially as an adjunct to (e.g. to manage the exacerbation of PTSD symptoms) or instead of trauma-focused therapies. From this study, we cannot conclude on the usefulness of adjunct non-trauma-focused therapies; e.g., offering adjunct non-trauma-focused therapies could lead to more patient behaviours that could be interpreted as retraumatisation, or increased patient distress could lead to the use of adjunct non-trauma-focused therapies, meaning that an optimal “dose” of a trauma-focused intervention is not delivered leading to patient behaviours that could be interpreted as retraumatisation. There is a need to research the integration of trauma-focused and non-trauma-focused therapies for PTSD, given that most participants (77.9%) reported routinely integrating therapies.

It is interesting to note that compassion-focused therapy (CFT) was endorsed as being routinely used by over 60% of clinicians working with people with PTSD (Chapter 3, Table 3, pg. 77). It could be that CFT is being used as a standalone therapy, or that CFT is being integrated with trauma-focused therapies. Since the evidence base is limited in relation to the use of CFT for PTSD (i.e., a recent meta-analysis on CFT as a standalone intervention for adults only included two papers on PTSD/trauma-related clinical populations; Millard et al., 2023), it could be questioned whether clinicians should currently be using CFT to treat PTSD. It is important to expand the evidence base regarding the use of CFT to treat PTSD (e.g., the PHASE-CPTSD study on the impact of compassionate resilience training; Duffy, 2023) to allow for the evidence-base to expand, which in turn can inform clinical practice.

Directions for future research

We conducted a meta-analysis and did not find evidence of symptom exacerbation at mid-treatment in trauma-focused compared to non-trauma-focused treatments. However, it is important to note that this is a comparison of mean scores, so it is possible that some patients may experience symptom exacerbation during trauma-focused treatment for PTSD, and it is also possible that harm of trauma-focused therapies is experienced in ways other than this operationalisation. Reporting on incidences of harm during therapy is rare, with Hoppen, Lindemann and Morina (2022) finding that only 56 out of a potential 157 RCTs of psychological interventions for adult PTSD reported on harms. Crawford, Parry and Duggan (2016) recommend that all three aspects of their definition of therapy-related iatrogenic harm (adverse events, significant deterioration, and patient-experienced harm) should be assessed and reported in future research, and this recommendation is supported by this thesis project and extended that these outcomes can even be reported in a repository instead of the main text of a paper. Several outcome measures have been developed which could be used to identify

potential iatrogenic harm in routine practice and/or future research, such as the Unwanted Event to Adverse Treatment Reaction checklist (UE-ATR; Linden, 2013), the Experiences of Therapy Questionnaire (ETQ; Parker, Paterson, Fletcher, McClure & Berk, 2014) and the Negative Effects Questionnaire (NEQ; Rozenthal, Kottorp, Boettcher, Andersson, & Carlbring, 2016).

Since most of the therapists in the included studies in the meta-analysis were trained in the specific trauma-focused intervention manual/protocol, which might not be representative of clinical practice, and Larsen and colleagues (2016) suggested a potential for symptom exacerbation if trauma-focused treatments are delivered by less experienced clinicians, it would be clinically relevant to research symptom exacerbation during trauma-focused interventions when these treatments are delivered by less experienced clinicians.

For the empirical study, we only surveyed clinicians due to the scale of the research project. However, the views of people who have received trauma-focused therapy for PTSD are key in this area of research. This is especially important since research has found that therapists can be poor at identifying when patients experience adverse effects based on clinical judgment alone (Hatfield et al., 2010). For this research, it would be important to gain the perspectives of people with varied experiences of trauma-focused therapy (i.e. people who have experienced recovery, no change from therapy and deterioration) and to explore whether people who have experienced trauma-focused therapy for PTSD understand there to be a difference between adverse effects of therapy and retraumatisation, and what they view as acceptable in terms of the potential for adverse effects of therapy. It could be useful to compare the criteria for harm in PTSD treatment outlined by Hoppen, Lindemann & Morina (2022) and definitions of retraumatisation with people who have experienced trauma-focused therapy for PTSD. Alongside this, since there is little reporting on adverse impacts during RCTs of psychological

therapies (Nutt & Sharpe, 2008), quantitative analysis of routine service data or available data from RCTs could be useful to explore reactions through trauma-focused therapy for people with PTSD.

Although we explored clinician confidence in trauma-focused and non-trauma-focused therapies, it is important to note that confidence in a therapy does not necessarily translate into competence or effective implementation. In future research, it would be useful to understand clinician confidence and competence for PTSD, and how this compares that for to other mental health disorders.

Conclusion

Overall, from our meta-analysis, we found no evidence of symptom exacerbation at mid- or post-treatment in terms of PTSD or depression during trauma-focused interventions. We, therefore, suggest that trauma-focused interventions should not be withheld from people with PTSD based on a fear of symptom exacerbation. Indeed, the benefits of trauma-focused interventions can be experienced through improved depression and possibly PTSD before the conclusion of therapy. However, since we found an increase in effect sizes in terms of PTSD symptoms and depression from mid- to post-treatment, we suggest that a full course of treatment is necessary to continue to reduce symptoms from mid-treatment. Although we suggested that symptom exacerbation could be one way to define retraumatisation, our empirical study suggests that there is not currently a shared view as to how retraumatisation is understood in practice. We found that participants reported trauma-focused treatment as harmful or leading to a worsening of PTSD symptoms in a small minority of cases (3.4%) and that the reporting of this was potentially linked to clinicians' interpretation of reactions that could be viewed as potential signs of retraumatisation and clinicians' fear of retraumatisation. We found that confidence in trauma-focused treatments for PTSD is generally high but that

there is a high degree of variation and that fear of retraumatisation is present for at least a significant minority of clinicians; therefore, this could be a reason why trauma-focused interventions are being withheld by some clinicians to treat PTSD.

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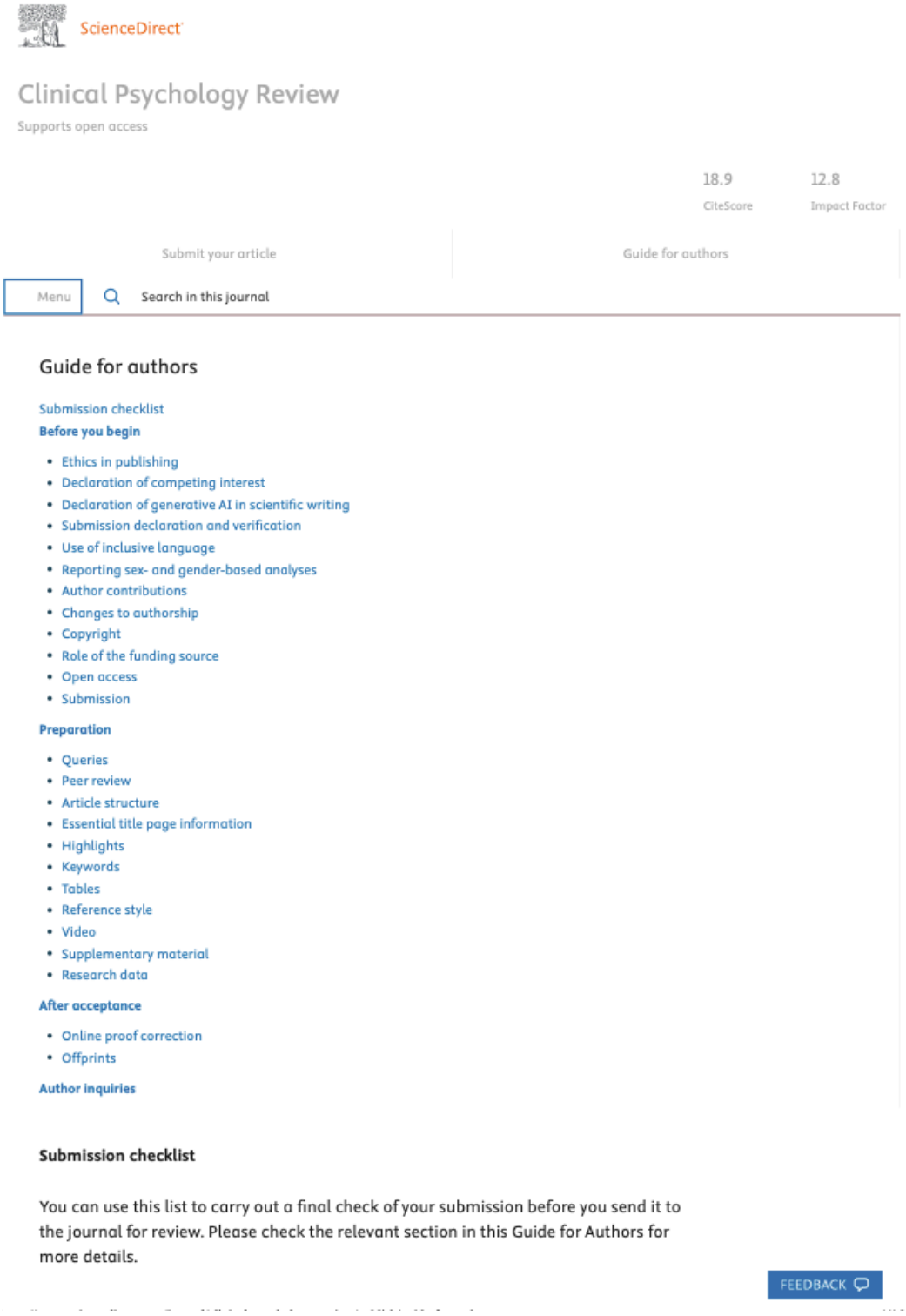
Appendices

Appendix A. *Author guidelines for Clinical Psychology Review*



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Appendix B. *PRISMA 2020 checklist*

Section and topic	Item No.	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	Title page
ABSTRACT			
Structured summary	2	See the PRISMA 2020 for Abstracts checklist.	Abstract completed but full PRISMA abstract checklist not used due to journal requirements
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Introduction
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Introduction
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Method
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Method and Figure 1
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Appendix C
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Method (automation tools n/a)
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Method (automation tools n/a)
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Method

	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Method
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Method (automation tools n/a)
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Method
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Method
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Extended method systematic review
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	n/a
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Method
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	n/a
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Method
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Method
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Method
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Results and Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Appendix E
Study characteristics	17	Cite each included study and present its characteristics.	Table 1 and Appendix H
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Appendix I
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Figure 2, 5, 6 + 7

Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Results
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Results
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	n/a
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Results
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Results
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	n/a
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Discussion
	23b	Discuss any limitations of the evidence included in the review.	Discussion
	23c	Discuss any limitations of the review processes used.	Discussion
	23d	Discuss implications of the results for practice, policy, and future research.	Discussion (n/a for policy)
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Method
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Method
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	n/a
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	n/a
Competing interests	26	Declare any competing interests of review authors.	n/a
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Method

Appendix C. *Search terms for database search*

PsycInfo

#	Search terms	Limiters	Results
S6		Published date: 1980 to current	3,583
S5		Human	3,583
S4	S1 AND S2 AND S3		3,836
S3	(TI (RCT OR trial* OR controlled trial OR randomi* controlled trial*)) OR (AB (RCT OR trial* OR controlled trial OR randomi* controlled trial*)) OR (SU (RCT OR trial* OR controlled trial OR randomi* controlled trial*)) OR (DE "Randomized Controlled Trials")		222,760
S2	(TI (treatment* OR intervention* OR therap* OR psychotherap* OR exposure)) OR (AB (treatment* OR intervention* OR therap* OR psychotherap* OR exposure)) OR (SU (treatment* OR intervention* OR therap* OR psychotherap* OR exposure)) OR (DE "Cognitive Behavior Therapy") OR (DE "Cognitive Therapy") OR (DE "Prolonged Exposure Therapy") OR (DE "Cognitive Processing Therapy") OR (DE "Psychotherapy")		1,527,636
S1	(TI (ptsd OR ptss OR post-trauma* stress OR posttrauma* adj1 stress OR post-traumatic adj1 syndrome OR posttraumatic adj1 syndrome)) OR (AB (ptsd OR ptss OR post-trauma* stress OR posttrauma* adj1 stress OR post-traumatic adj1 syndrome OR posttraumatic adj1 syndrome)) OR (SU (ptsd OR ptss OR post-trauma* stress OR posttrauma* adj1 stress OR post-traumatic adj1 syndrome OR posttraumatic adj1 syndrome)) OR (DE "Posttraumatic Stress Disorder") OR (DE "Stress Reactions") OR (DE "Posttraumatic Stress")		71,210

Medline

#	Search terms	Limiters	Results
S6		Published date: 1980 to current	3,522
S5		Human	3,522
S4	S1 AND S2 AND S3		4,358
S3	(RCT.tw) OR (trial*.tw) OR (controlled trial.tw) OR (randomi* controlled trial*.tw)		1,303,961
S2	(treatment*.tw) OR (intervention*.tw) OR (therap*.tw) OR (psychotherap*.tw) OR (exposure.tw) OR (Cognitive Behavioral Therapy/) OR (Psychotherapy/)		180,501
S1	(Stress Disorders, Post-Traumatic/) OR (PTSD.tw) OR (PTSS.tw) OR (posttrauma* adj1 stress.tw) OR (post-trauma* adj1 stress.tw) OR (post-traumatic syndrome.tw) OR (posttraumatic adj1 syndrome.tw)		49,070

CINAHL

#	Search terms	Limiters	Results
S6		Human	1,649
S5		Published date: 1980 to current	2,198
S4	S1 AND S2 AND S3		2,198
S3	(TI (RCT OR trial* OR controlled trial OR randomi* controlled trial*)) OR (AB (RCT OR trial* OR controlled trial OR randomi* controlled trial*)) OR (MH "Randomized Controlled Trials") OR (MH "Clinical Trials")		582, 176
S2	(TI (treatment* OR intervention* OR therap* OR psychotherap* OR exposure)) OR (AB (treatment* OR intervention* OR therap* OR psychotherap* OR exposure)) OR (MH "Cognitive Therapy") OR (MH "Psychotherapy")		1,987,373
S1	(TI (PTSD OR PTSS OR posttrauma* adj1 stress OR post-trauma* adj1 stress OR posttraumatic adj1 syndrome OR post-traumatic adj1 syndrome)) OR (AB (PTSD OR PTSS OR posttrauma* adj1 stress OR post-trauma* adj1 stress OR posttraumatic adj1 syndrome OR post-traumatic adj1 syndrome))		7,182

PTSDpubs

#	Search terms	Limiters	Results
S5		Published date: 1980 to current	495
S4	S1 AND S2 and S3		495
S3	title(RCT OR trial* OR controlled trial OR randomi* controlled trial*)		1,212
S2	title(treatment* OR intervention* OR therap* OR psychotherap* OR exposure)		13,044
S1	title(ptsd OR ptss OR post-trauma* stress OR posttrauma* NEAR/1 stress OR post-traumatic NEAR/1 syndrome OR posttraumatic NEAR/1 syndrome)		25,246

Appendix D. *References of meta-analyses scrutinised as part of the search*

The reference lists of the following meta-analyses were screened for eligibility:

Coventry, P. A., Meader, N., Melton, H., Temple, M., Dale, H., Wright, K., Cloitre, M., Karatzias, T., Bisson, J., Roberts, N. P., Brown, J. V. E., Barbui, C., Churchill, R., Lovell, K., McMillan, D., & Gilbody, S. (2020). Psychological and pharmacological interventions for posttraumatic stress disorder and comorbid mental health problems following complex traumatic events: Systematic review and component network meta-analysis. *PLoS Med*, 17(8), e1003262. https://doi.org/10.1371/journal.pmed.1003262

Ennis, N., Sijercic, I., & Monson, C. M. (2021). Trauma-focused cognitive-behavioral therapies for posttraumatic stress disorder under ongoing threat: A systematic review. *Clinical Psychology Review*, 88, 102049. https://doi.org/10.1016/j.cpr.2021.102049

Gerger, H., Werner, C. P., Gaab, J., & Cuijpers, P. (2021). Comparative efficacy and acceptability of expressive writing treatments compared with psychotherapy, other writing treatments, and waiting list control for adult trauma survivors: a systematic review and network meta-analysis. *Psychological Medicine*, 52(15), 1-13. https://doi.org/10.1017/S0033291721000143

Hoppen, T. H., Jehn, M., Holling, H., Mutz, J., Kip, A., & Morina, N. (2023). The efficacy and acceptability of psychological interventions for adult PTSD: A network and pairwise meta-analysis of randomized controlled trials. *Journal of Consulting and Clinical Psychology*, 91(8), 445-461. https://doi.org/10.1037/ccp0000809

Hoppen, T. H., Kip, A., & Morina, N. (2023). Are psychological interventions for adult PTSD more efficacious and acceptable when treatment is delivered in higher frequency? A meta-analysis of randomized controlled trials. *Journal of Anxiety Disorders*, 95, 102684. https://doi.org/https://doi.org/10.1016/j.janxdis.2023.102684

Hoppen, T. H., Lindemann, A. S., & Morina, N. (2022). Safety of psychological interventions for adult post-traumatic stress disorder: meta-analysis on the incidence and relative risk of deterioration, adverse events and serious adverse events. *British Journal of Psychiatry*, 1-10. https://doi.org/10.1192/bjp.2022.111

Jericho, B., Luo, A., & Berle, D. (2022). Trauma-focused psychotherapies for post-traumatic stress disorder: A systematic review and network meta-analysis. *Acta Psychiatrica Scandinavica*, 145(2), 132-155. https://doi.org/10.1111/acps.13366

Lewis, C., Roberts, N. P., Andrew, M., Starling, E., & Bisson, J. I. (2020). Psychological therapies for post-traumatic stress disorder in adults: systematic review and meta-analysis. *European Journal of Psychotraumatology*, 11(1), 1729633. https://doi.org/10.1080/20008198.2020.1729633

Mavranezouli, I., Megnin-Viggars, O., Daly, C., Dias, S., Welton, N. J., Stockton, S., Bhutani, G., Grey, N., Leach, J., Greenberg, N., Katona, C., El-Leithy, S., & Pilling, S. (2020). Psychological treatments for post-traumatic stress disorder in adults: a network meta-analysis. *Psychological Medicine*, 50(4), 542-555. https://doi.org/10.1017/S0033291720000070

McLean, C. P., Levy, H. C., Miller, M. L., & Tolin, D. F. (2022). Exposure therapy for PTSD: A meta-analysis. *Clinical Psychology Review*, 91, 102115. https://doi.org/10.1016/j.cpr.2021.102115

Morina, N., Hoppen, T. H., & Kip, A. (2021). Study quality and efficacy of psychological interventions for posttraumatic stress disorder: a meta-analysis of randomized controlled trials. *Psychological Medicine*, 51(8), 1260-1270. https://doi.org/10.1017/S0033291721001641

Sciarrino, N. A., Warnecke, A. J., & Teng, E. J. (2020). A Systematic Review of Intensive Empirically Supported Treatments for Posttraumatic Stress Disorder. *Journal of Traumatic Stress*, 33(4), 443-454. https://doi.org/10.1002/jts.22556

Siddaway, A. P., Meiser-Stedman, R., Chester, V., Finn, J., Leary, C. O., Peck, D., & Loveridge, C. (2022). Trauma-focused guided self-help interventions for posttraumatic stress disorder: A meta-analysis of randomized controlled trials. *Depression and Anxiety*, 39(10-11), 675-685. https://doi.org/10.1002/da.23272

Snoek, A., Nederstigt, J., Ciharova, M., Sijbrandij, M., Lok, A., Cuijpers, P., & Thomaes, K. (2021). Impact of comorbid personality disorders on psychotherapy for post-traumatic stress disorder: systematic review and meta-analysis. *European Journal of Psychotraumatology*, 12(1), 1929753. https://doi.org/10.1080/20008198.2021.1929753

Weber, M., Schumacher, S., Hannig, W., Barth, J., Lotzin, A., Schafer, I., Ehring, T., & Kleim, B. (2021). Long-term outcomes of psychological treatment for posttraumatic stress disorder: a systematic review and meta-analysis. *Psychological Medicine*, 51(9), 1420-1430. https://doi.org/10.1017/S003329172100163X

Appendix E. *Reasons for exclusion at full-text screen of database search*

Reasons for exclusion

Ref	Reason for exclusion	N
A	No reported measure of PTSD at mid-point during trauma-focused treatment	202
B	Paper reporting secondary data analysis	25
C	All study groups received a trauma-focused treatment	16
D	No study group received a trauma-focused treatment	12
E	Study protocol	4
F	Mean participant age <18	1
G	Study is not an RCT	1
H	Duplicate	1
I	Therapy augmented with medication	1

Papers excluded

Paper number	Reference	Primary reason for exclusion
1	Abdollahpour et al. (2018)	A
2	Abdollahpour et al. (2019)	A
3	Acarturk et al. (2015)	A
4	Acarturk et al. (2016)	A
5	Adenauer et al. (2011)	A
6	Ahmadi et al. (2018)	F
7	Allard et al. (2021)	B
8	Andersen et al. (2021)	A
9	Andrews et al. (2022)	A
10	Applebaum et al. (2012)	A
11	Asukai et al. (2008)	A
12	Asukai et al. (2010)	A
13	Badour et al. (2022)	B
14	Bækkelund et al. (2021)	D
15	Barrios (2011)	A
16	Bartel (2021)	D
17	Başoğlu et al. (2003)	A
18	Bauer et al. (2022)	B
19	Bayley et al. (2022)	A
20	Beck et al. (2009)	A
21	Beck et al. (2021)	C
22	Beidel et al. (2011)	A
23	Beidel et al. (2019)	C
24	Belleville et al. (2018)	A
25	Bisson et al. (2004)	A

26	Bisson et al. (2022)	A
27	Bohus et al. (2020)	C
28	Bolton et al. (2014)	A
29	Boterhoven de Haan et al. (2020)	A
30	Bradshaw et al. (2014)	A
31	Brady et al. (2021)	A
32	Brief et al. (2013)	D
33	Bryant et al. (2008)	C
34	Bryant et al. (2016)	A
35	Bryant et al. (2022)	A
36	Buhmann et al. (2016)	A
37	Butollo et al. (2016)	A
38	Callands et al. (2023)	D
39	Capone et al. (2018)	A
40	Carletto et al. (2016)	A
41	Carlsson et al. (2018)	A
42	Castillo et al. (2016)	A
43	Cigrang et al. (2017)	A
44	Classen et al. (2011)	A
45	Cloitre et al. (2010)	A
46	Coffey et al. (2016)	A
47	Cooper et al. (2017)	A
48	Cranston (2016)	A
49	Davis et al. (2018)	D
50	de Bont et al. (2013)	E
51	de Bont et al. (2016)	A
52	de Bont, van Minnen and de Jongh (2013)	C
53	de Kleine et al. (2015)	C
54	Difede et al. (2007)	A
55	Dondanville et al. (2019)	A
56	Duffy, Gillespie and Clark (2007)	A
57	Duhamel et al. (2010)	A
58	Dunne, Kenardy and Sterling (2012)	A
59	Duran et al. (2023)	A
60	Ehlers et al. (2020)	E
61	Elbarazi et al. (2022)	A
62	Ellis (2023)	A
63	Ertl et al. (2011)	A
64	Eskici et al. (2023)	A
65	Fan et al. (2021)	A
66	Fecteau (2000)	A

67	Foa et al. (2005)	A
68	Foa et al. (2013)	A
69	Foa et al. (2017)	A
70	Foa et al. (2018)	A
71	Forbes et al. (2012)	A
72	Ford et al. (2018)	A
73	Fortney et al. (2015)	A
74	Frankfurt et al. (2019)	B
75	Frisman et al. (2008)	D
76	Gallagher, Matthew and Resick (2012)	A
77	Gawlytta et al. (2022)	A
78	Gersons et al. (2000)	A
79	Gofman et al. (2021)	A
80	Gonzalez et al. (2017)	D
81	Graham et al. (2018)	B
82	Graham et al. (2020)	B
83	Gray et al. (2021)	A
84	Gray, Budden-Potts and Bourke (2019)	A
85	Gros et al. (2013)	C
86	Gutner et al. (2016)	B
87	Harb et al. (2019)	A
88	Hensel-Dittmann et al. (2011)	A
89	Hensler et al. (2022)	D
90	Hermenau et al. (2013)	A
91	Hien et al. (2017)	B
92	Hien et al. (2018)	B
93	Hijazi (2013)	A
94	Hijazi et al. (2014)	A
95	Hinton et al. (2005)	A
96	Hobfoll et al. (2016)	D
97	Hofman et al. (2022)	A
98	Högberg et al. (2007)	A
99	Holder et al. (2017)	B
100	Holder et al. (2018)	B
101	Holder et al. (2019)	B
102	Holliday et al. (2015)	A
103	Horesh et al. (2017)	A
104	Ironson et al. (2013)	A
105	Ivarsson et al. (2019)	A
106	Jacob et al. (2014)	A
107	Jaffe et al. (2021)	A

108	Jamshidi, Rajabi and Dehghani (2021)	A
109	Jarero et al. (2015)	A
110	Jarero, Givaudan and Osorio (2018)	A
111	Johnson and Hoffart (2019)	A
112	Johnson et al. (2017)	A
113	Jung and Steil (2013)	A
114	Karatzias et al. (2007)	A
115	Karatzias et al. (2019)	A
116	Katz et al. (2014)	A
117	Kearney et al. (2021)	A
118	Kehle-Forbes et al. (2019)	C
119	Kip et al. (2013)	A
120	Kleindienst et al. (2021)	B
121	Kline et al. (2021)	A
122	Kline, Feeny and Zoellner (2021)	A
123	Knaevelsrud and Maercker (2007)	A
124	Knaevelsrud et al. (2015)	A
125	Koebach et al. (2021)	A
126	Kroese et al. (2016)	A
127	Krupnick et al. (2017)	A
128	Lange et al. (2000)	A
129	Lange et al. (2001)	A
130	Lange et al. (2003)	A
131	Larsen et al. (2016)	B
132	Latif et al. (2021)	A
133	Le et al. (2014)	A
134	Le et al. (2018)	A
135	Lee, Kim and Nam (2021)	A
136	Lehavot et al. (2021)	A
137	Lely et al. (2021)	A
138	Lely et al. (2022)	A
139	Levi et al. (2016)	A
140	Levitt et al. (2007)	D
141	Lewis et al. (2017)	A
142	Li et al. (2023)	E
143	Lindauer et al. (2005)	A
144	Littleton and Grills (2019)	A
145	Littleton et al. (2016)	A
146	Litz et al. (2007)	A
147	Litz et al. (2021)	C
148	Lloyd et al. (2014)	B

149	Lovell et al. (2001)	A
150	Lyons (2023)	A
151	Macdonald et al. (2011)	B
152	Macdonald et al. (2016)	B
153	Maercker et al. (2006)	A
154	Markowitz et al. (2015)	A
155	Markowitz et al. (2017)	B
156	Mathes et al. (2020)	A
157	Maxwell (2018)	A
158	McDonagh et al. (2005)	A
159	McGeary et al. (2022)	A
160	McGovern et al. (2011)	A
161	McGovern et al. (2015)	A
162	McLay et al. (2011)	A
163	McLean et al. (2023)	A
164	McMullen et al. (2013)	A
165	Meshberg-Cohen (2010)	A
166	Miller et al. (2019)	A
167	Mills et al. (2012)	A
168	Miyahira et al. (2012)	A
169	Morath et al. (2014)	A
170	Moreira et al. (2022)	A
171	Mueser et al. (2008)	A
172	Mullen et al. (2014)	B
173	Myers et al. (2015)	A
174	Nacasch et al. (2011)	A
175	Neuner et al. (2004)	A
176	Neuner et al. (2008)	A
177	Neuner et al. (2010)	A
178	Nidich et al. (2018)	A
179	Niemeyer et al. (2020)	A
180	Nieminen et al. (2016)	A
181	Nijdam et al. (2012)	A
182	Nijdam et al. (2018)	C
183	Nixon (2012)	A
184	O'Cleirigh et al. (2019)	A
185	Orang et al. (2018)	A
186	Pacella et al. (2012)	A
187	Paquin et al. (2022)	A
188	Pearson et al. (2020)	A
189	Pearson et al. (2023)	A

190	Peck et al. (2018)	A
191	Popiel et al. (2015)	A
192	Pruiksma (2012)	A
193	Pruiksma et al. (2020)	A
194	Raabe (2022)	A
195	Rauch et al. (2021)	I
196	Rauch et al. (2019)	B
197	Resick et al. (2008)	C
198	Resick, Nishith and Griffin (2003)	A
199	Rimane et al. (2018)	A
200	Roberts (2018)	A
201	Robjant et al. (2019)	A
202	Röhr et al. (2021)	A
203	Rosen et al. (2013)	A
204	Sandahl et al. (2021)	A
205	Sannibale et al. (2013)	A
206	Saraiya et al. (2022)	B
207	Schaal, Elbert and Neuner (2009)	A
208	Schäfer et al. (2019)	A
209	Schnurr and Lunney (2015)	A
210	Schnurr et al. (2003)	A
211	Schnurr et al. (2007)	A
212	Schnurr et al. (2007)	H
213	Schnurr et al. (2023)	C
214	Schnyder et al. (2011)	A
215	Schulz-Heik et al. (2023)	A
216	Shapiro, Laub and Rosenblat (2018)	A
217	Shemesh et al. (2011)	A
218	Sijbr et al. (2007)	A
219	Simpson et al. (2022)	A
220	Sloan et al. (2012)	A
221	Smyth, Hockemeyer and Tulloch (2008)	A
222	Sonne et al. (2021)	B
223	Spence et al. (2011)	A
224	Stanbury et al. (2023)	C
225	Stecker et al. (2014)	A
226	Steinert et al. (2017)	A
227	Steuwe et al. (2022)	A
228	Surís et al. (2013)	A
229	Tarrier and Humphreys (2000)	C
230	Tarrier et al. (1999)	A

231	ter Heide et al. (2011)	A
232	Ter Heide et al. (2016)	A
233	Thompson et al. (2016)	A
234	Thorp and Glassman (2019)	A
235	Thrasher et al. (2010)	B
236	Trottier et al. (2022)	A
237	Tutus et al. (2017)	A
238	Tylee et al. (2018)	A
239	van den Berg et al. (2015)	A
240	van den Berg et al. (2016)	C
241	van der Asdonk et al. (2022)	E
242	van der Kolk et al. (2007)	A
243	van der Meer et al. (2020)	A
244	van Emmerik, Kamphuis and Emmelkamp (2008)	A
245	Vaughan et al. (1994)	A
246	Vujanovic et al. (2018)	C
247	Wagner et al. (2016)	B
248	Wang, Wang and Maercker (2013)	A
249	Weiss et al. (2015)	A
250	Wiltsey Stirman et al. (2021)	A
251	Wiltsey Stirman et al. (2021)	G
252	Woodward et al. (2017)	B
253	Woud et al. (2021)	D
254	Wu, Li and Cho (2014)	A
255	Yurtsever et al. (2018)	A
256	Zang et al. (2017)	A
257	Zang, Hunt and Cox (2013)	A
258	Zang, Hunt and Cox (2014)	A
259	Zatzick et al. (2021)	D
260	Zemestani et al. (2022)	A
261	Zlotnick et al. (2009)	A
262	Zoellner et al. (2011)	A
263	Zoellner et al. (2018)	A

Appendix F. *Full quality assessment criteria*

These quality criteria are based on the method used by Cuijpers et al. (2010), Hoppen, Lindemann, & Morina (2022), Hoppen et al. (2023) and Morina, Hoppen, & Kip (2021). Each criterion was rated as 1 = met criteria or 0 = did not meet criteria/insufficient information.

1) All participants met diagnostic criteria for PTSD at baseline. This had to be assessed using a diagnostic interview based on any edition of the DSM or ICD.

2) The intervention group and any control group that used an intervention used a manual that was published, or specifically designed for the study (including a manual that was adapted for the study). If the paper only stated that the intervention was "manual-based," this was insufficient. The paper had to specify the manual/treatment protocol used or reference it.

3) Therapists were trained in the treatment manual/protocol used specifically for the study or general clinical work.

4) Treatment integrity was checked formally by regular supervision and/or recordings and/or ratings of adherence to treatment protocol.

5) Data were analysed using intent-to-treat analysis meaning that all participants that were randomised to the conditions at baseline were included in analyses.

6) The study had a minimal level of statistical power to find significant effects of the treatment (reported power analysis and met that target) and included ⩾50 participants in a comparison between groups.

7) Randomisation was conducted by an independent party (by a person independent to the study, or by a computer program).

8) Blind assessors for PTSD outcome measure. Self-report-based outcome assessment also received a positive score.

Appendix G. *References of included trials*

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Appendix H. *Further study characteristics*

Author (year)	PTSD eligibility criteria	Diagnostic system	Mid-Tx PTSD measure	Mid-Tx depression measure	Timing of mid-treatment measure(s)	Total sample index trauma type
Allen et al. (2022)	MINI	DSM-5	PCL-C	PHQ-9	Week 5	ST; M; MT/TC; D/SI/HSigOther; Other
Back et al. (2019)	CAPS	DSM-IV	CAPS	BDI	Week 6	81.0% M; 19.0% Other
Ehlers et al. (2014)	CAPS	DSM-IV	PDS	BDI	Week 6	38.0% A/ND/F; 37.2% PV/ST; 17.4% Other; 7.4% D/SI/HSigOther
Ehlers et al. (2023)	CAPS	DSM-5	PCL-5	PHQ-9	Week 6	24% A/ND/F; 19% D/SI/HSigOther; 16% ST; 16% MT/TC; 15% PV; 9.7% M
Ghafoori et al. (2017)	PCL-5 score 33 or over and "clinical interview meeting DSM-5 criteria"	DSM-5	PCL-5	BSI-18-Depression	Session 6	ST; DV; PV; D/SI/HSigOther; HT/C; Other
Kline et al. (2021)	DSM-5 "full or subthreshold PTSD[1]"	DSM-5	PCL-5	PHQ-9	Session 7	M; ST; PV; A/ND/F; D/SI/HSigOther
Markowitz et al. (2015)	CAPS	DSM-IV	CAPS	HAM-D	Week 7	PV; ST; Other
Monson et al. (2006)	CAPS	DSM-IV	CAPS	BDI	Intervention = session 6; WL = week 3	78.3% M; 16.7 ST; 5.0% PV
Monson et al. (2012)	CAPS	DSM-IV-TR	CAPS	-	Intervention = week 8; WL = week 4	20% ST; 27.5% CST; 15% PV; 12.5% Other; 7.5% TA; 12.5% D/SI/HSigOther; 5% M
Peck et al. (2023)	CAPS and PCL-5 score ≥33	DSM-5	CAPS	BDI	Session 8	33.3% ST; 26.7% PV; 6.7% A/ND/F; 3.3% M; 30% Other
Rauch et al. (2015)	CAPS score ≥ 50	DSM-IV	CAPS	-	Session 6	100% M

Reger et al. (2016)	CAPS	DSM-IV	CAPS	BDI	Intervention = session 5; WL = 2.5 weeks	100% M
Resick et al. (2002)	CAPS	DSM-IV	PSS	-	Session 6	100% ST
Resick et al. (2015)	PSS-I	DSM-IV-TR	PCL-S	BDI	Week 3	99% M; 1% CST
Rosner et al. (2019)	CAPS-CA with lowered threshold[2]	DSM-IV-TR	CAPS	-	After a mean (SD) of 83 (27) days from study entry	100% CST and/or CNST
Ruglass et al. (2017)	CAPS "full or subthreshold PTSD[3]"	DSM-IV-TR	MPSS-SR	-	Session 6	PV; D/SI/HSigOther; ST; A/ND/F; Other
Sloan et al. (2018)	CAPS	DSM-5	CAPS	BDI	NR	69.7% C; 11% Other; 8.6% A/ND/F; 7.1% D/SI/HSigOther; 3% ST; 0.5% CST
van Dam et al. (2013)	"Full or partial PTSD[3]"	DSM-IV	PDS	-	Session 5	NR
Vera et al. (2021)	CAPS	DSM-IV	CAPS	-	Week 8	NR
Vera et al. (2015)	CAPS	DSM-5	PCL-5	-	Week 6	PV; NR ST; D/SI/HSigOther; TA; M; Other
Wells et al. (2015)	SCID-I/P	DSM-IV-TR	IES	-	Session 4	46.9% Other; 25% TA; 12.5% A/ND/F; 9.4% ST; 6.25% M
Zaccari et al. (2022)	CAPS	DSM-IV-TR	CAPS	-	NR	100% ST (within M)
Zaccari et al. (2023)	CAPS	DSM-IV-TR	CAPS	-	NR	100% ST (within M)

Note. **Index trauma type:** A/ND/F = accident/natural disaster/fire; CNST = childhood non-sexual trauma; CST = childhood sexual trauma; D/SI/HSigOther = death/severe illness/harm to significant other; DV = domestic violence; HT/C = human trafficking/captivity; M = military; MT/TC = medical trauma/traumatic childbirth; O = occupational; PV = physical violence; ST = sexual trauma; TA = transportation accident.

[1] Included participants with up to one missing symptom from DSM-5 diagnosis.

[2] Included participants who presented with a minimum of two avoidance symptoms (instead of the three defined in the DSM-IV-TR*)*.

[3] Included participants who met the DSM-IV-TR Criterion A (traumatic event), B (reexperiencing cluster), E (duration) and F (distress/impairment), and either C (avoidance cluster) and/or D (hyperarousal cluster).

Appendix I. *Quality assessment for each study*

Trial	Q1 – 100% baseline PTSD diagnosis rate	Q2 – manual-based (intervention group)	Q3 – therapist training	Q4 – integrity checks	Q5 – ITT analyses	Q6 – N > 50 and met power analysis target	Q7 – independent randomisation	Q8 – blinded outcome assessment (for PTSD measure)	Sum score (out of 8)
Allen et al. (2022)	1	1	0	0	1	0	1	1 (SR)	5
Back et al. (2019)	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**7**
Ehlers et al. (2014)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1 (SR)**	**8**
Ehlers et al. (2023)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1 (SR)**	**8**
Ghafoori et al. (2017)	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1 (SR)**	**7**
Kline et al. (2021)	0	1	0	0	1	1	0	1 (SR)	4
Markowitz et al. (2015)	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**7**
Monson et al. (2006)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**8**
Monson et al. (2012)	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**7**
Peck et al. (2023)	1	1	1	1	1	0	1	0	6
Rauch et al. (2015)	0	1	0	0	0	0	0	1	2
Reger et al. (2016)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**8**

Resick et al. (2002)	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**1 (SR)**	**7**
Resick et al. (2015)	1	0	1	1	0	1	0	1 (SR)	5
Rosner et al. (2019)	0	0	1	1	1	0	1	1 (SR)	5
Ruglass et al. (2017)	0	1	1	1	1	0	1	1 (SR)	6
Sloan et al. (2018)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**8**
van Dam et al. (2013)	0	0	0	1	1	0	0	1 (SR)	3
Vera et al. (2011)	1	1	1	1	1	0	0	1	6
Vera et al. (2021)	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1 (SR)**	**7**
Wells et al. (2015)	1	1	1	1	0	0	1	1 (SR)	6
Zaccari et al. (2022)	1	1	1	1	1	0	1	0	6
Zaccari et al. (2023)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**7**

Note. SR= self-report. Bold font indicates high quality of trial (i.e., sum score ≥ 7 out of 8).

Appendix J. *Author guidelines for Journal of Anxiety Disorders*

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- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
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Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

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Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement, it is recommended to state this.

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Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Additional Information

Editorial guidance

The *Journal of Anxiety Disorders* publishes articles of relevance to the epidemiology, psychopathology, etiology, assessment, treatment, and prevention of anxiety and related disorders in both child and adult populations. The format of the articles includes randomized controlled trials, single case clinical outcome studies, theoretical expositions, epidemiological studies, investigations of early mechanisms of risk, genetic and biomarker studies, neuroimaging studies, critical literature reviews, meta-analyses, and dissemination and implementation studies. We are also interested in evaluations of novel treatment delivery strategies, including the use of information technologies. Authors are encouraged to use methodologically rigorous sampling, structured or semistructured diagnostic interviews, randomization, therapist fidelity, and inter-rater reliability procedures where appropriate. Given limited journal space, we can accept only a limited number of studies, and we prefer to publish studies of clinical or community samples. However, we recognize that studies using other samples (e.g., undergraduate analogues) can provide meaningful increments to knowledge. Therefore, while emphasizing our preference for clinical or community samples that are most appropriate for the question under study, we will consider studies using other samples in so far as we judge them to make a significant incremental contribution to the understanding of anxiety and related disorders or anxiety psychopathology more broadly.

Queries

For questions about the editorial process (including the status of manuscripts under review) or for technical support on submissions, please visit our Support Center.

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This journal operates a single anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

REVISED SUBMISSIONS

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Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

Theory/calculation

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

Results

Results should be clear and concise.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

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A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. The abstract should not exceed 200 words in length and should be submitted on a separate page following the title page.

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Keywords

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Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

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Electronic artwork

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- Make sure you use uniform lettering and sizing of your original artwork.
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- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files.

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Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
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TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.
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- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

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Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

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As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

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This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Preprint references

Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

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Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

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There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:
Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T. (2015). Mortality data for Japanese oak wilt disease and surrounding forest compositions. Mendeley Data, v1. http://dx.doi.org/10.17632/xwj98nb39r.1

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Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

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To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

Appendix K. *Empirical study ethical approval*

RE: Decision - Ethics ETH2223-0005 : Miss Lucy Purnell

University of East Anglia

Study title: Retraumatisation during Trauma-Focused Interventions for Post-Traumatic Stress Disorder: An Online Survey

Application ID: ETH2223-0005

Dear Lucy,

Your application was considered on 5th December 2022 by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee).

The decision is: **approved**.

You are therefore able to start your project subject to any other necessary approvals being given.

If your study involves NHS staff and facilities, you will require Health Research Authority (HRA) governance approval before you can start this project (even though you did not require NHS-REC ethics approval). Please consult the HRA webpage about the application required, which is submitted through the IRAS system.

This approval will expire on **8th January 2024**.

Please note that your project is granted ethics approval only for the length of time identified above. Any extension to a project must obtain ethics approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) before continuing.

It is a requirement of this ethics approval that you should report any adverse events which occur during your project to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) as soon as possible. An adverse event is one which was not anticipated in the research design, and which could potentially cause risk or harm to the participants or the researcher, or which reveals potential risks in the treatment under evaluation. For research involving animals, it may be the unintended death of an animal after trapping or carrying out a procedure.

It is a requirement of this ethics approval that you should report any adverse events which occur during your project to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) as soon as possible. An adverse event is one which was not anticipated in the research design, and which could potentially cause risk or harm to the participants or the researcher, or which reveals potential risks in the treatment under evaluation. For research involving animals, it may be the unintended death of an animal after trapping or carrying out a procedure.

Any amendments to your submitted project in terms of design, sample, data collection, focus etc. should be notified to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) in advance to ensure ethical compliance. If the amendments are substantial a new application may be required.

Approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) should not be taken as evidence that your study is compliant with the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018. If you need guidance on how to make your study UK GDPR compliant, please contact the UEA Data Protection Officer (dataprotection@uea.ac.uk).

Please can you send your report once your project is completed to the FMH S-REC (fmh.ethics@uea.ac.uk).

I would like to wish you every success with your project.

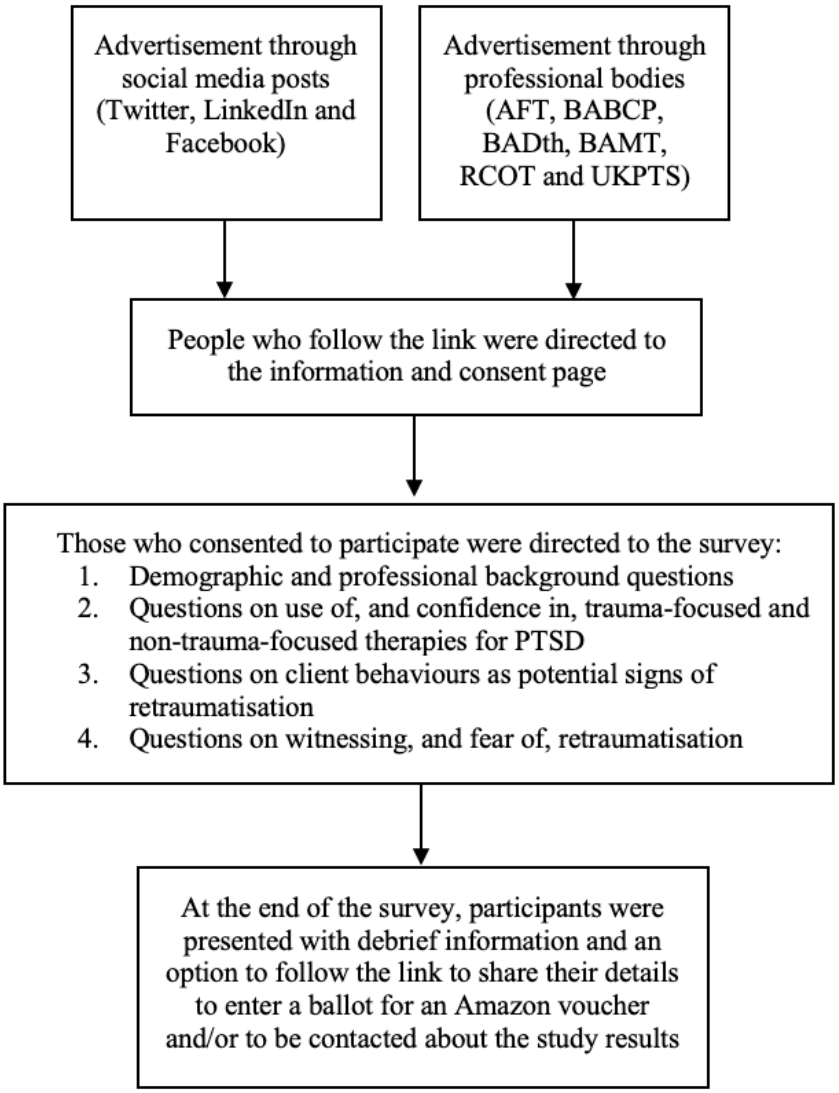
On behalf of the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee)

Yours sincerely,

Paul Linsley

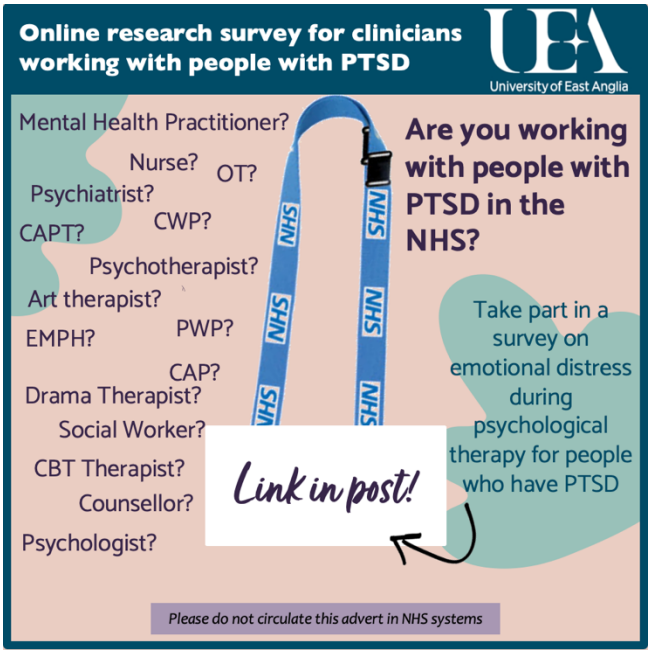
Ethics ETH2223-0005 : Miss Lucy Purnell

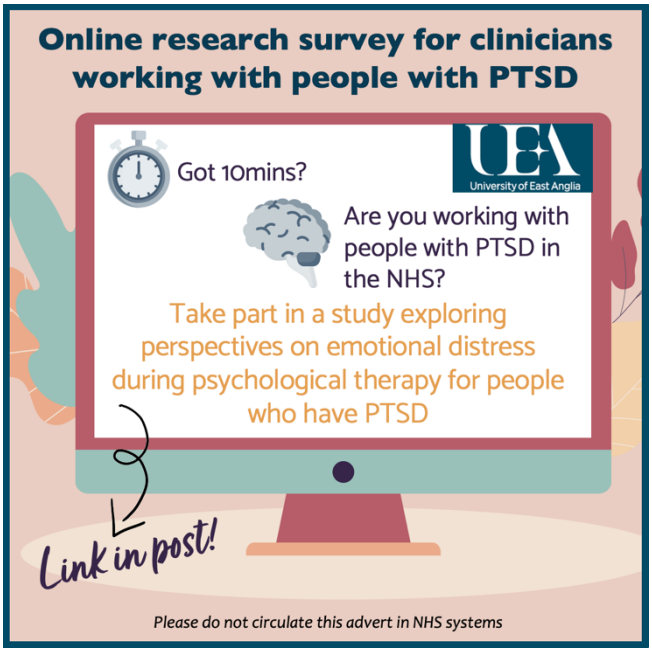
Appendix L. *Procedure flowchart*



Note. AFT = Association for Family Therapy; BABCP = British Association of Behavioural and Cognitive Psychotherapies; BADth = British Association for Dramatherapists; BAMT = British Association for Music Therapies; RCOT = Royal College of Occupational Therapists; UKPTS = UK Psychological Trauma Society.

Appendix M. *Social media recruitment materials*




Online research survey for clinicians working with people with PTSD
Got 10mins?
University of East Anglia
Are you working with people with PTSD in the NHS?
Take part in a study exploring perspectives on emotional distress during psychological therapy for people who have PTSD
Link in post!
Please do not circulate this advert in NHS systems


University of East Anglia
Are you working with people with PTSD in the NHS? Are you interested in taking part in an online research study?
We would like to invite you to take part in a study exploring clinicians' perspectives on emotional distress during psychological therapy for people who have posttraumatic stress disorder (PTSD). Click through for more information!
Free online PTSD training
and a chance to win an Amazon voucher!
Please do not circulated this advert through NHS systems
Scan here!

Appendix N. *Recruitment email for professional bodies*

Email subject

Online research survey for clinicians working with people with PTSD

Attachments

Image:

Email content

Online research survey for clinicians working with people with PTSD

Are you a clinician in the NHS working with people with PTSD?

Are you interested in taking part in an online research study?

We would like to invite you to take part in an online research study exploring clinicians' perspectives on emotional distress during psychological therapy for people who have posttraumatic stress disorder (PTSD).

We are conducting an online survey to understand better what treatment is currently being offered to people with PTSD and why.

Taking part involves completing an online survey that takes roughly **10 minutes**.

Upon completion of the survey, you will be offered an opportunity to enter a **ballot for 1 of 5 available £25 Amazon vouchers** and/or to sign up for **a free online PTSD training workshop**!

If you are interested in taking part in our study, please follow this link: https://bit.ly/402c6vg

If you would like more information, please contact Lucy Purnell by email at lucy.purnell@uea.ac.uk

Thank you for your time!

Appendix O. *Participant information page*

Study title: Clinician perspectives on emotional distress during psychological therapy for people with posttraumatic stress disorder (PTSD)

Thank you for your interest in taking part in this study!

Before you decide whether to take part, please read the following information carefully. If you have any questions or would like more information, please email: lucy.purnell@uea.ac.uk

Participant Information

(1) What is this study about?

This study aims to explore clinician perspectives on emotional distress during treatment for people who have PTSD. This Information Statement outlines the study to help you decide whether you would like to take part, please read it carefully and ask any questions. Your participation is voluntary, and you retain the right to withdraw up to the point of submission.

(2) Who can take part in the study?

You can take part in this study if you are currently working in the NHS in the UK and care for people with PTSD. You are not eligible to take part in this study if you only provide private psychological therapy, you work outside of the UK, or you do not provide psychological therapy. Lastly, Trainee Clinical Psychologists in the UEA 2021 cohort are not eligible to participate. If this criterion applies to you, you are not eligible to participate, and we kindly ask you to exit the survey at this point.

(3) Who is running the study?

This study is being conducted by Lucy Purnell, a Trainee Clinical Psychologist, within the Medical School at the University of East Anglia. The study's primary supervisor is Prof Richard Meiser-Stedman.

(4) What will the study involve for me?

Your participation would require the completion of an online survey. You will first be asked for some demographic and employment information. Then you will be asked to read a fictional vignette describing a client who has PTSD relating to a physical assault and how they react to psychological treatment. There might also be mention of emotional abuse. You will be asked to complete several questions regarding how you interpret the clients' reactions to treatment. Lastly, you will be asked about your work with people with PTSD.

(5) How much of my time will the study take?

The survey should not take any longer than 10 minutes to complete.

(6) Do I have to take part? Can I withdraw from the study once I've started?
Participation is voluntary. You can withdraw from the survey prior to completion and your data will not be saved. Withdrawing will not affect your legal or employment rights. You can do this by closing your internet browser which will exit the survey. However, once you have confirmed the submission of your responses and completed the survey, you will not be able to withdraw your data from the study since all data will be anonymous.

(7) Are there any risks associated with taking part?
The vignette in this survey briefly describes a fictional case of trauma. Reading about this can be distressing. You are advised to stop the survey if you feel uncomfortable. If you complete the survey and experience distress or become concerned for your own mental health, you are encouraged to seek support. You can contact your GP for mental health support and Samaritans offer a 24/7 listening service via 116 123.

(8) Are there any benefits associated with being in the study?
This study will hopefully provide insight into different perspectives on how clients react to psychological therapies. This could help us to understand aspects of clinical decision-making. If you choose to provide your email address, you can enter a prize draw for one of five £25 Amazon vouchers and/or be contacted with the details of a free training session on working clinically with people with PTSD.

(9) What will happen to the information about me that is collected during the study?
By consenting to participate, you are agreeing to the anonymous research data to be used for the purpose of this study. Any information you provide will only be used for the purposes outlined in this Participant Information Statement unless you consent otherwise. The Data Protection Act (2018) and the University of East Anglia Research Data Management Policy (2019) will always be adhered to. The information you provide is anonymous and so you will be unidentifiable. All data will be stored securely on the UEA One Drive file sharing system. This will ensure that only the primary researcher and supervisor have access to the data. Anonymised data will be shared on the Open Science Framework repository. Findings from this study will be written up to be presented for dissemination and publication, but you will not be identifiable. After study completion, data will be transferred to the primary supervisor (Professor Richard Meiser-Stedman) to be stored securely online within the UEA systems for 10 years. The data will be deposited with UEA archives in line with the Research Data Management Policy which states that research data is held by the University for a minimum 10-year period. After this period, the data will be reviewed and either retained or destroyed by UEA.

(10) What if I would like further information about the study?
Once you have read this information, you can ask any further questions by contacting Lucy Purnell (lucy.purnell@uea.ac.uk).

(11) What will happen after I complete the survey?
At the end of the survey, you will be provided with an option to complete a different survey to share your email address and first name so we can contact you. Your response to this will not be linked to your responses on the main survey. This information will only be accessible to the primary researcher (Lucy Purnell) and will be stored securely on the UEA One Drive system, separate from the other study data. We will use the information from this survey to enter you into the ballot for an Amazon voucher, send details of the PTSD training that we are holding to thank participants and/or to send a one-page lay summary of the results once the study is completed. Please note, it is not possible to provide feedback on your individual responses. This identifiable information will be destroyed once a lay summary has been distributed.

(12) What if I have a complaint or any concerns about the study?
The ethical aspects of this study have been approved under the regulations of the UEA's Faculty of Medicine and Health Sciences Research Ethics Committee. If you are concerned about the way this study is being conducted or wish to make a complaint to someone independent from the study team, please contact the Programme Director (Professor Sian Coker): S.Coker@uea.ac.uk

(13) OK, I want to take part – what do I do next?
You will be asked to review the consent statement for this study on the next page.

Appendix P. *Participant consent statement*

Participant Consent Statement

By acknowledging that I have read this consent form and clicking to proceed with the online survey, I agree to take part in this research study. In giving my consent I state that:

I understand the purpose of the study, what I will be asked to do, and any risks/benefits involved.

I have read the Participant Information Statement and have the information to contact the researchers to discuss my involvement in the study if I wished to do so.

I understand that taking part in this study is completely voluntary and I do not have to take part.

I understand that my data is anonymous and held confidentially. Only the researcher (Lucy Purnell) and supervisor (Prof Richard Meiser-Stedman) will have access to the data from this survey.

I understand that I can withdraw from the study at any point during the survey, and my data will not be submitted. However, I understand that once I have confirmed completed and submitted the survey, I will not be able to withdraw my data from the study.

I understand that the information collected will be stored securely and will only be used for the purpose of this research study.

I understand that the results of this study may be published, but these publications will not contain any identifiable information about me.

Please click the blue arrow below to confirm your consent and be directed to the survey

Appendix Q. *Survey*

Demographic and Employment Information Questions

What is your age?

What is your sex?

- Female
- Male

Is the gender you identify with the same as your sex registered at birth? This question is voluntary

- Yes
- No, please enter gender identity below:

What is your ethnic group? (Choose one option that best describes your ethnic group or background)

White - English, Welsh, Scottish, Northern Irish or British
White - Irish
White - Gypsy or Irish Traveller
White - Roma
White - Any other White background
Mixed or multiple ethnic groups - White and Black Caribbean
Mixed or multiple ethnic groups - White and Black African
Mixed or multiple ethnic groups - White and Asian
Mixed or multiple ethnic groups - Any other Mixed or multiple ethnic background
Asian or Asian British

Asian or Asian British - Indian
Asian or Asian British - Pakistani
Asian or Asian British - Bangladeshi
Asian or Asian British - Chinese
Asian or Asian British - Any other Asian background
Black, Black British, Caribbean or African - Caribbean
Black, Black British, Caribbean or African - African
Black, Black British, Caribbean or African - Any other Black, Black British, or Caribbean backgroun
Other ethnic group - Arab
Other ethnic group - Any other ethnic group

What is the highest level of education you have completed?

GCSE/BTEC Levels 1-2/NVQ Level 1-2 or equivalent

A Levels/BTEC Level 3/NVQ Level 3 or equivalent

Certificate of Higher Education/BTEC Professional Diplomas/NVQ Level 4 Foundation Degree/Diploma of Higher Education/HND

Bachelor's degree/PGCE

Master's Degree/Postgraduate certificate or diploma

Doctoral Degree (e.g., medical degree, PhD, ClinPsyD)

Which of the below best describes your core professional background (even if currently training)?

- Adult Psychotherapist
- Art therapist
- Child and Adolescent Psychotherapist (CAPT)
- Children's Wellbeing Practitioner (CWP)
- Clinical Associate in Psychology (CAP)
- Clinical Psychologist
- Cognitive Behavioural Therapist (CBT Therapist)
- Counselling Psychologist
- Counsellor
- Drama therapist
- Education Mental Health Practitioner (EMHP)
- Family and Systemic Psychotherapist
- Forensic Psychologist
- Health Psychologist
- Mental Health Practitioner
- Nurse
- Occupational Therapist
- Psychiatrist
- Psychological Wellbeing Practitioner (PWP)
- Social Worker
- Other, please enter below:

Are you currently in training for any of the core professions selected?

No. Enter number of qualified years below:

Yes. Enter number of years training you have completed below:

Not applicable

What population do you currently work with? (you can select multiple options if applicable)

Children and adolescents (up to 18)	Youth service (14-25)	Adults (18-65)	Older adults (65+)

What kind of NHS employment setting do you currently work in? (you can select multiple options if applicable)

- Community
- Crisis service
- Day patient
- Forensic
- Improving Access to Psychological Therapies (IAPT) Service
- Inpatient (e.g., CAMHS/adult/older adult inpatient)
- Learning Disability
- Primary care
- Specialised outpatient (e.g., perinatal, early intervention in psychosis, outpatient eating disorder, outpatient personality disorder)
- Specialised inpatient (e.g., inpatient eating disorder/personality disorder)
- Staff wellbeing
- Other

→

Treatment Approaches

Of the following psychological approaches, which do you routinely offer and use to treat PTSD, and how confident do you feel in using them to treat PTSD?

0% = not confident at all (to select 0, you still need to click the slider at 0)
100% = extremely confident

If you do not use the approaches, please select 'Not applicable'

0 10 20 30 40 50 60 70 80 90 100

Acceptance and Commitment Therapy (ACT) ☐ Not Applicable

Art Therapy ☐ Not Applicable

Cognitive Analytic Therapy (CAT) ☐ Not Applicable

Cognitive Behavioural Therapy (CBT) ☐ Not Applicable

Cognitive Therapy for PTSD (CT-PTSD) ☐ Not Applicable

Cognitive Processing Therapy (CPT) ☐ Not Applicable

Compassion Focused Therapy (CFT) ☐ Not Applicable

Counselling ☐ Not Applicable

Drama Therapy ☐ Not Applicable

Exposure Therapy ☐ Not Applicable

Eye Movement Desensitization and Reprocessing (EMDR) ☐ Not Applicable

Family Therapy ☐ Not Applicable

Group Therapy ☐ Not Applicable

Mindfulness Based Therapy (MBT) ☐ Not Applicable

Music Therapy ☐ Not Applicable

Narrative Therapy ☐ Not Applicable

Person-centred Therapy ☐ Not Applicable

Prolonged Exposure (PE) ☐ Not Applicable

Psychodynamic Psychotherapy ☐ Not Applicable

Trauma-focused Cognitive Behavioural Therapy (TF-CBT) ☐ Not Applicable

Other ☐ Not Applicable

Do you routinely integrate psychological approaches?

Yes

No

→

Vignette part 1(randomly allocated to vignette 1, 2, 3 or 4)

To what extent do you agree with the statements below?
0% = completely disagree (to select 0, you still need to click the bar at 0)
100% = completely agree

0 10 20 30 40 50 60 70 80 90 100

As a therapist, I would feel worried about Sam's reaction

Sam's reaction would be a priority to discuss in supervision

Sam's reaction is normal for people undergoing PTSD treatment

It would be helpful to teach Sam mindfulness skills before working on trauma memories again

Sam needs sessions of stabilisation

Sessions for Sam's PTSD treatment should be paused

Sam should be referred for another form of treatment

Her distress shows that she is engaging in the therapy task optimally

Her reaction suggests that this form of therapy will not be effective for Sam

Sam has been 'retraumatised' by her therapy

Vignette part 2

To what extent do you agree with the statements below?
0% = completely disagree (to select 0, you still need to click the bar at 0)
100% = completely agree

0 10 20 30 40 50 60 70 80 90 100

As a therapist, I would feel worried about Sam's reaction

Sam's reaction would be a priority to discuss in supervision

Sam's reaction is normal for people undergoing PTSD treatment

It would be helpful to teach Sam mindfulness skills before working on trauma memories again

Sam needs sessions of stabilisation

Sessions for Sam's PTSD treatment should be paused

Sam should be referred for another form of treatment

Her distress shows that she is engaging in the therapy task optimally

Her reaction suggests that this form of therapy will not be effective for Sam

Sam has been 'retraumatised' by her therapy

→

The survey will now ask questions about your work with people with PTSD

How many clients with PTSD do you estimate you have worked with in the past 6 months using trauma-focused therapy?

Thinking about your work with people with PTSD in general…

0 10 20 30 40 50 60 70 80 90 100

How much do you worry about trauma-focused therapy being harmful in its own right, or leading to a lasting worsening of PTSD symptoms? (0% = not worried at all - 100%= extremely worried)

Have you witnessed trauma-focused therapy as being harmful in its own right, or leading to a lasting worsening of PTSD symptoms, in any of the clients you have seen over the past 6 months?

Yes

No

→

Display this question

If Have you witnessed trauma-focused therapy as being harmful in its own right, or leading to a last... Yes Is Selected

How many clients have you witnessed trauma-focused therapy as being harmful in its own right, or leading to a lasting worsening of PTSD symptoms, over the past 6 months?

The term 'retraumatisation' has been used to describe the therapy experience as being harmful in its own right, and potentially leading to a lasting worsening of PTSD symptoms.

In general, to what extent do you think the following suggests a client is undergoing 'retraumatisation'?

0% = does not suggest 'retraumatisation' at all (to select 0, you still need to click the slider at 0)
100% = indicative of 'retraumatisation'

0 10 20 30 40 50 60 70 80 90 100

Becoming tearful in the session

Zoning out/dissociating in the session

Having a panic attack in the session

Having a flashback in the session (reliving a past trauma or fragments of it, and feeling as if it is happening in the here and now)

Feeling more anxious in the hours or days after a treatment session

Feeling jumpier in the hours or days after a treatment session

Having more flashbacks in the hours or days after a treatment session

Having more frequent nightmares the nights following a treatment session

Increased substance use (recreational drugs and/or alcohol)

Not attending therapy sessions after signs of distress in sessions

Increase in behaviours relating to risk to self (e.g. self-harm)

Are there any other signs of retraumatisation that you look out for? If yes, please detail below:

No

Yes

→

Appendix R. *Participant debrief information*

Participant Debrief Information

Thank you for taking part in this research study! We recognise the pressure that clinicians are under and appreciate the time that you have devoted to offering your insights. Your information will help us to collect information on perspectives on PTSD treatment to better understand what treatment is currently being offered to people with PTSD and why. In addition, your answers will help us to identify the clinician and service user characteristics that influence treatment approaches when working with people with PTSD.

If you would like to enter our ballot for 1 of 5 **Amazon vouchers**, join our online **PTSD training** or receive a **summary of the results** of this study, please **fill in this form**: https://forms.office.com/r/PvTBV3YxcG (you need to copy this link into your browser)

If you have any questions or concerns about the study, please contact Lucy Purnell: lucy.purnell@uea.ac.uk

The results of the study will be shared in a range of formats, such as:
• A thesis for the UEA Clinical Psychology program
• Publication in academic journals
• Presentation at research conferences

If you have been upset or distressed by taking part in the study, we would advise you to contact us directly, or speak to your GP. You can also call the Samaritans for free on 116 123.

If you have any problems or complaints about the study, please contact the research supervisor, Prof Richard Meiser-Stedman: R.Meiser-Stedman@uea.ac.uk. Additionally, you can contact the programme director (Prof Sian Coker): S.Coker@uea.ac.uk if you are concerned about the way this study is being conducted or wish to make a complaint to someone independent from the study team.

If you are interested to know more about the national guidance for PTSD treatment, you can go to the www.nice.org.uk/guidance/ng116

Thank you again for your participation!

Appendix S. *Confidence in trauma-focused (TF) and non-trauma-focused (non-TF) therapies by profession*

	Clinical Psychologists			CBT Therapists			Other Professionals		
	N = 173			N = 76			N = 99		
Variable	M	(SD)	N	M	(SD)	N	M	(SD)	N
Confidence: TF									
TF-CBT	65.3	(25.2)	131	75.2	(22.2)	63	69.3	(28.7)	45
CT-PTSD	62.4	(29.1)	95	71.4	(22.9)	65	63.9	(30.4)	38
EMDR	64.2	(30.4)	79	78.3	(39.5)	18	57.4	(35.0)	34
Exposure	59.5	(28.5)	67	65.9	(37.9)	20	57.0	(30.1)	43
PE	46.0	(30.2)	33	73.8	(39.2)	14	53.7	(32.7)	21
CPT	36.6	(30.4)	24	67.8	(40.8)	8	45.6	(35.9)	16
NET[1]	75.4	(23.0)	17	82.5	(13.3)	2	70.0	(21.9)	3
Most strongly endorsed TF	72.5	(20.9)	157	78.4	(17.1)	73	75.2	(21.7)	68
N TF therapies endorsed	2.6	(1.6)	173	2.5	(1.3)	76	2.0	(1.8)	99
Confidence: non-TF									
CBT	63.6	(23.4)	144	74.6	(19.7)	73	62.6	(27.8)	81
CFT	58.6	(23.6)	130	53.6	(32.3)	25	61.3	(30.7)	59
ACT	48.1	(24.9)	96	46.9	(28.1)	18	47.5	(26.5)	47
Narrative	47.4	(28.2)	67	57.3	(26.5)	14	59.9	(31.8)	28
MBT	43.6	(29.5)	43	48.1	(32.3)	12	51.6	(34.7)	40
Group therapy	45.8	(27.8)	32	58.8	(35.5)	8	60.7	(33.9)	34
Person-centred	52.4	(32.6)	33	78.9	(42.3)	9	64.8	(35.8)	30
CAT	40.3	(27.7)	50	6.0	-	1	47.9	(33.9)	22
Family therapy	40.2	(21.4)	38	57.0	(10.3)	2	53.1	(28.9)	25
Counselling	44.4	(31.8)	17	81.3	(43.4)	6	58.4	(35.1)	38
Art therapy	3.0	(1.8)	5	18.0	(10.5)	2	49.9	(32.9)	21
Psychodynamic	29.5	(23.5)	29	40.5	(31.9)	4	47.0	(31.4)	23
Music therapy	16.6	(15.7)	5	8.0	-	1	57.5	(37.2)	15
Drama therapy	6.2	(4.1)	5	51.0	(36.8)	2	53.6	(35.7)	14
DBT[1]	69.7	(9.2)	3	-	-	0	76.0	(16.9)	5
Most strongly endorsed non-TF	73.3	(24.3)	164	76.2	(23.0)	74	79.8	(29.2)	92
N non-TF therapies endorsed	4.0	(2.8)	173	2.3	(2.7)	76	4.9	(4.2)	99

Appendix T. *Contact with study authors*

Study	Reason for contact	*k*
A	Reported collecting mid-treatment PTSD data but did not report sufficient data for inclusion	17
B	We required more information to assess study eligibility	6
C	To request other data that was not essential for inclusion	1

Study	Reason for contact	Contact	Outcome
Allen et al. (2022)	A	Provided: Mean age and SD for iCBT and control groups Mid-treatment N for PE and AR groups Unable to provide data on sample ethnicity as this was not collected.	Included
Kline et al. (2021)	A	Provided: Mean age and SD for SS and COPE groups % female for SS and COPE groups Mid-treatment PCL-5 mean and SD for SS and COPE groups Mid-treatment PHQ-9 mean and SD for SS and COPE groups	Included
Rauch et al. (2015)	C	Provided: Mean age and SD for PE and PCT groups % female for PE and PCT groups Detail on inclusion criteria regarding trauma type experienced Timing of mid-treatment measure	Included
Reger et al. (2016)	B	Signposted to the paper for requested data.	Included
Resick et al. (2002)	A	Provided: Mean age and SD for the CPT, PE and minimal attention groups Mid-treatment PSS mean, SD and N for CPT, PE and minimal attention groups N for post-treatment data	Included
Rosner et al. (2019)	B	Replied with detail of the control group: “none of those receiving psychosocial support participated in a evidence	Included

		based psychotherapy. Rather it was a mixed bag of visiting general practicioners etc."	
Ruglass et al. (2017)	A	Provided SPSS datasheet with which we calculated: Mid-treatment MPSS-SR mean, SD and N for COPE, RPT and active monitoring control groups End of treatment MPSS-SR mean, SD and N for COPE, RPT and active monitoring control groups	Included
Vera et al. (2021)	A	Provided weekly mean PCL-5 scores by group, from which we extracted: Mid-treatment PCL-5 mean, SD and N for PE and AR groups	Included
Cooper et al. (2017)	A	Cooper replied stating no longer being able to access data. Suggested another contact, contacted in June and August 2023 but received no reply.	Excluded
Litz et al. (2021)	A	Provided data, however, it was later decided through discussion with a Clinical Psychologist external to this review that Adaptive Disclosure (AD) met criteria as a trauma-focused treatment. The following data was provided: Mid-treatment PCL-5 mean, SD and N for AD and CPT groups Mid-treatment PHQ-9 mean, SD and N for AD and CPT groups End of treatment PCL-5 mean, SD and N for AD and CPT groups End of treatment PHQ-9 mean, SD and N for AD and CPT groups	Excluded
Beidel et al. (2011)	A	Replied stating that they did not have mid-treatment scores for the PCL-M.	Excluded
Ehlers et al. (2003)*	B	Replied stating that data was only available for session 3, which was only 25% through the protocol.	Excluded
Foa et al. (2013)	A	Replied stating mid-treatment scores were not available.	Excluded
Li et al. (2023)	B	Emailed to ask whether study data from protocol was available. No reply.	Excluded
Myers et al. (2015)	A	Replied stating team no longer had access to study data.	Excluded
Nidich et al. (2018)	A	Emailed in June and July 2023 but received no reply.	Excluded
Nieminen et al. (2016)	A	Emailed in June and July 2023 but received no reply.	Excluded
Nijdam et al. (2012)	B	Replied stating that mid-treatment data was not collected for the EMDR group and so the study was not eligible for inclusion.	Excluded
Popiel et al. (2015)	A	Emailed in June and August 2023 but received no reply.	Excluded
Rothbaum et al. (2005)*	A	Replied with study data, however mid-treatment data was not reported.	Excluded

Rosen et al. (2013)	A	Emailed in July and August 2023 but received no reply.	Excluded
Taylor et al. (2003)*	A	Emailed in October and November 2023 but received no reply.	Excluded
Thorp et al. (2019)	A	Replied stating no longer had access to study data.	Excluded
Wiltsey Stirman et al. (2021)	B	Replied stating study was not a RCT.	Excluded

Note. All above studies were given the exclusion reason "No reported measure of PTSD at mid-point during trauma-focused treatment."

* Papers marked with * were found by searching papers included in recent meta-analyses. All other papers in the table above were from the main search.

Appendix U. *Survey case vignettes*

Below are the four different case vignettes for the manipulation of a physical assault in childhood v adulthood, and a history of emotional abuse v no significant trauma history. The differences are highlighted in bold.

Part 1

Case Vignette 1 (physical attack age 10 + emotional abuse)

Sam is a 30-year-old woman who has recently been diagnosed with PTSD. Sam's PTSD symptoms started following an assault when she was **10 years old**. Sam was walking through a dark park when the perpetrator attacked her and held her to the floor. When she tried to fight back, they punched her and broke her jaw. Sam then froze, and the perpetrator stole her bag.

Sam had also been in an **emotionally abusive relationship for 1 year**, but she ended this relationship 2 years ago, and Sam reports that she exclusively has PTSD symptoms from the attack when her jaw was broken.

Sam gave informed consent to trauma-focused therapy where the focus of the work would be the attack where her jaw was broken. Sam is now undertaking trauma-focused cognitive behavioural therapy (TF-CBT) at an NHS outpatient service. In her first two sessions, Sam set goals for psychological therapy, was provided with psychoeducation and a rationale for reliving and trauma-focused work, and was taught some grounding techniques.

In her third session, Sam was asked to 'relive' the trauma in her mind, including images, thoughts, and feelings, whilst describing the trauma in the present tense. During the 'reliving,' Sam started sobbing, and she explained that she felt the same level of fear and panic that she felt at the time of the trauma, when she thought she was going to be very badly hurt.

Case Vignette 2 (physical attack age 10, no significant trauma)

Sam is a 30-year-old woman who has recently been diagnosed with PTSD. Sam's PTSD symptoms started following an assault when she was **10 years old**. Sam was walking through a dark park when the perpetrator attacked her and held her to the floor. When she tried to fight back, they punched her and broke her jaw. Sam then froze, and the perpetrator stole her bag.

Sam had **not experienced any other significant trauma before or after this event**, and Sam reports that she exclusively has PTSD symptoms from the attack when her jaw was broken.

Sam gave informed consent to trauma-focused therapy where the focus of the work would be the attack where her jaw was broken. Sam is now undertaking trauma-focused cognitive behavioural therapy (TF-CBT) at an NHS outpatient service. In her first two sessions, Sam set goals for psychological therapy, was provided with psychoeducation and a rationale for reliving and trauma-focused work, and was taught some grounding techniques.

In her third session, Sam was asked to 'relive' the trauma in her mind, including images, thoughts, and feelings, whilst describing the trauma in the present tense. During the 'reliving,' Sam started sobbing, and she explained that she felt the same level of fear and panic that she felt at the time of the trauma, when she thought she was going to be very badly hurt.

Case Vignette 3 (physical attack age 30 + emotional abuse)

Sam is a 30-year-old woman who has recently been diagnosed with PTSD. Sam's PTSD symptoms started following an assault **one year ago**. Sam was walking through a dark park when the perpetrator attacked her and held her to the floor. When she tried to fight back, they punched her and broke her jaw. Sam then froze, and the perpetrator stole her bag.

Sam had also been in an **emotionally abusive relationship for 1 year**, but she ended this relationship 2 years ago, and Sam reports that she exclusively has PTSD symptoms from the attack when her jaw was broken.

Sam gave informed consent to trauma-focused therapy where the focus of the work would be the attack where her jaw was broken. Sam is now undertaking trauma-focused cognitive behavioural therapy (TF-CBT) at an NHS outpatient service. In her first two sessions, Sam set goals for psychological therapy, was provided with psychoeducation and a rationale for reliving and trauma-focused work, and was taught some grounding techniques.

In her third session, Sam was asked to 'relive' the trauma in her mind, including images, thoughts, and feelings, whilst describing the trauma in the present tense. During the 'reliving,'

Sam started sobbing, and she explained that she felt the same level of fear and panic that she felt at the time of the trauma, when she thought she was going to be very badly hurt.

Case Vignette 4 (physical attack age 30, no significant trauma)

Sam is a 30-year-old woman who has recently been diagnosed with PTSD. Sam's PTSD symptoms started following an assault **one year ago**. Sam was walking through a dark park when the perpetrator attacked her and held her to the floor. When she tried to fight back, they punched her and broke her jaw. Sam then froze, and the perpetrator stole her bag.

Sam had **not experienced any other significant trauma before or after this event**, and Sam reports that she exclusively has PTSD symptoms from the attack when her jaw was broken.

Sam gave informed consent to trauma-focused therapy where the focus of the work would be the attack where her jaw was broken. Sam is now undertaking trauma-focused cognitive behavioural therapy (TF-CBT) at an NHS outpatient service. In her first two sessions, Sam set goals for psychological therapy, was provided with psychoeducation and a rationale for reliving and trauma-focused work, and was taught some grounding techniques.

In her third session, Sam was asked to 'relive' the trauma in her mind, including images, thoughts, and feelings, whilst describing the trauma in the present tense. During the 'reliving,' Sam started sobbing, and she explained that she felt the same level of fear and panic that she felt at the time of the trauma, when she thought she was going to be very badly hurt.

Part 2

At the fourth session, Sam said that she felt drained and tired following the reliving session and decided to take a day off work. She had also experienced more nightmares and intrusions than usual about the trauma. She reported feeling emotionally 'raw.' She said that she felt unsure about coming to the therapy session.