Review Article

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Long-Term Durability of First-Line Trauma-Focused Psychotherapies for Adults with Posttraumatic Stress Disorder: A Systematic Review

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Abstract

Background and Objectives: First-line trauma-focused psychotherapies are recommended for posttraumatic stress disorder (PTSD); however, their capacity to produce sustained recovery after treatment remains unclear. This review aimed to evaluate symptom durability and remission-related outcomes following first-line interventions in adults with PTSD.

Methods: This review followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 guidelines. PubMed/MEDLINE, Scopus, Cochrane Library, and Web of Science were searched for studies published from 2000 onward, with supplementary Google Scholar screening. Eligible studies included adults with PTSD receiving prolonged exposure (PE), cognitive processing therapy (CPT), eye movement desensitization and reprocessing (EMDR), or manualized trauma-focused cognitive-behavioral therapy variants. Studies required at least 30 participants. Long-term outcomes were defined as assessments conducted at least 6 months after treatment completion. Risk of bias and methodological quality were assessed using RoB 2 and the Newcastle–Ottawa Scale. Findings were synthesized narratively because populations, interventions, follow-up timing, and outcome definitions were heterogeneous.

Results: The search identified 350 records; 62 full-text articles were assessed, and 26 primary reports were included. PE had the densest contemporary long-term evidence base, especially from 2018 onward, reflecting a greater volume of studies but not superior long-term effectiveness. CPT showed durability across populations and delivery formats. EMDR demonstrated supportive long-term benefit, although fewer modern studies were available. Sustained symptom reduction was reported more consistently than remission, loss of diagnosis, relapse, recurrence, or functional recovery.

Conclusion: First-line trauma-focused psychotherapies often produce durable symptom improvement after treatment completion. However, evidence is stronger for sustained symptom reduction than for sustained remission, relapse or recurrence outcomes, or functional recovery. Future studies should standardize definitions of remission and relapse and anchor follow-up to treatment completion.

Keywords: Follow-up studies, Posttraumatic Stress disorders, Systematic review, Treatment outcome

Introduction

Posttraumatic stress disorder (PTSD) is a trauma-related mental disorder that may develop after exposure to actual or threatened death, serious injury, sexual violence, or other severe traumatic experiences. It is characterized by intrusive re-experiencing, avoidance of trauma-related cues, negative alterations in cognition and mood, and persistent hyperarousal (1). PTSD is frequently associated with impaired social, occupational, and interpersonal functioning, reduced quality of life, psychiatric comorbidity, and increased healthcare use. Therefore, effective treatment should not be limited to short-term symptom reduction but should also support sustained recovery over time.

Current clinical guidelines recommend trauma-

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focused psychological interventions as first-line treatments for PTSD in adults. In particular, prolonged exposure (PE), cognitive processing therapy (CPT), trauma-focused cognitive-behavioral therapy (TF-CBT) variants, and eye movement desensitization and reprocessing (EMDR) are recommended in major clinical practice guidelines, although the strength and volume of evidence vary across approaches (2, 3). In this review, the term "first-line trauma-focused psychotherapy" was used pragmatically for these guideline-recommended approaches and did not imply equivalent evidence or comparative superiority. Eligible TF-CBT variants were manualized adult treatments in which direct processing of traumatic memories and/or trauma-related cognitions was a core component, including cognitive therapy for PTSD and protocols combining trauma exposure with cognitive restructuring; generic CBT without an explicit trauma focus was not considered eligible. Network meta-analyses have shown that trauma-focused psychotherapies are among the most effective interventions for reducing PTSD symptoms in adults (4, 5). Recent evidence syntheses have also supported the clinical relevance of EMDR, while indicating that direct comparisons between EMDR and other evidence-based psychological treatments often show limited or uncertain differences across several outcomes (6,7).

Despite this large evidence base, an important clinical question remains insufficiently resolved: whether improvements following trauma-focused psychotherapy remain durable after treatment completion. Previous systematic reviews and network meta-analyses have mainly compared treatment efficacy at post-treatment or across mixed follow-up periods (4–7), while other reviews have examined loss of PTSD diagnosis (8) or the broader occurrence and predictors of recurrence (9). This review differs by focusing on outcomes assessed at least 6 months after treatment completion and by jointly examining sustained symptom change, remission-related outcomes, relapse, recurrence, and functional recovery across PE, CPT, EMDR, and eligible TF-CBT variants. This focus matters clinically because symptom improvement at treatment completion does not establish durable remission or recovery.

These outcome concepts should not be used interchangeably. Symptom improvement refers to a reduction in PTSD severity without necessarily crossing a diagnostic or clinical threshold. Symptom-based remission refers to scores falling below a validated clinical threshold, whereas loss of diagnosis means that full diagnostic criteria are no longer met; these outcomes may overlap but are not equivalent (8). Recovery is a broader concept that includes sustained clinical improvement together with restoration of functioning. Relapse generally denotes the return of clinically significant symptoms after remission, whereas recurrence refers to a later return of the disorder after a period of recovery; however, these terms remain inconsistently defined in the PTSD literature (9).

Long-term outcomes may also be influenced by trauma type, PTSD chronicity, psychiatric comorbidity, treatment adherence and attrition, and the setting in which treatment is delivered. Variation in these factors, together with inconsistent outcome reporting, can limit direct comparisons between interventions. Treatment durability was therefore defined as maintenance of remission or sustained symptom improvement at follow-up assessments conducted at least 6 months after completion of the active psychological intervention. This threshold distinguished persistence of treatment effects from immediate or short-term post-treatment response.

Accordingly, this systematic review aimed to evaluate long-term symptom durability and remission-related outcomes following first-line trauma-focused psychological interventions in adults with PTSD. The review focused on peer-reviewed primary empirical studies published from 2000 onward, with adult PTSD samples, sample sizes of at least 30 participants, and follow-up assessments conducted at least 6 months after treatment completion or extending beyond the active treatment protocol. By synthesizing evidence across PE, CPT, EMDR, and eligible adult TF-CBT variants, this review seeks to clarify both the durability of treatment gains and the extent to which remission, loss of diagnosis, relapse, recurrence, and functional recovery have been reported, without inferring treatment superiority from the volume of available evidence.

Materials and Methods

Study Design and Protocol

This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines (10). The review was undertaken as part of a doctoral dissertation, and a separate prospective protocol was not registered. However,

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the eligibility criteria were established a priori, before database searching and study screening began. The absence of prospective protocol registration was acknowledged as a methodological limitation. The primary objective was to evaluate long-term symptom durability and remission-related outcomes following first-line psychological interventions for PTSD.

Eligibility Criteria

Eligibility criteria included peer-reviewed primary empirical studies, including RCTs, noninferiority trials, long-term follow-up reports of clinical trials, and prospective longitudinal primary studies. Studies were eligible if they investigated adults (≥18 years) diagnosed with PTSD according to the Diagnostic and Statistical Manual of Mental Disorders (DSM), DSM-5, or International Classification of Diseases ICD-10/11 criteria. Only studies published from the year 2000 onward and with a total sample size of ≥30 participants were retained. The sample-size threshold was established a priori to reduce the influence of very small samples and improve the stability and interpretability of long-term outcome estimates; it was not treated as an indicator of study quality and may have excluded potentially informative smaller studies. Eligible interventions included PE, CPT, EMDR, and manualized trauma-focused cognitive-behavioral therapies adapted for adults. Eligible TF-CBT variants were required to include direct processing of traumatic memories and/or trauma-related cognitions as a core treatment component, including cognitive therapy for PTSD and protocols combining trauma exposure with cognitive restructuring. Phase-based protocols were eligible only when they included an explicit trauma-processing component. Generic CBT, present-centered therapy, supportive therapy, and stabilization-only interventions were not considered eligible trauma-focused index treatments, although they could serve as comparators. Studies focusing exclusively on non-PTSD primary diagnoses (e.g., adjustment disorder) or exclusively on Complex PTSD without separable PTSD outcome data were excluded. Systematic reviews and meta-analyses were not included as primary data sources but were screened for reference tracking.

Information Sources and Search Strategy

A comprehensive literature search was conducted in PubMed/MEDLINE, Scopus, the Cochrane Library, and Web of Science. Google Scholar was searched as a supplementary source to identify additional potentially eligible records. The final searches were completed in June 2026. Searches were limited to peer-reviewed studies published from 2000 onward, in accordance with the eligibility criteria. Supplementary Table S1 provides complete database-specific search strings, field codes, limits, search timing, and screening notes; Table 1 summarizes the sesystematic review

arch and records identified.

Table 1. Summary of Search Strategy and Records Identified

Source	Search Strategy	Limits/Notes	Records Identified
PubMed/MEDLINE	(“PTSD” OR “posttraumatic stress disorder” OR “post-traumatic stress disorder” OR “Stress Disorders, Post-Traumatic”[MeSH]) AND (“prolonged exposure” OR “cognitive processing therapy” OR “CPT” OR “CPT-SA” OR “EMDR” OR “eye movement desensitization and reprocessing” OR “eye movement desensitisation and reprocessing” OR “trauma-focused CBT” OR “cognitive therapy for PTSD” OR “STAIR” OR “STAIR Narrative Therapy”) AND (“follow-up” OR “long-term” OR “durability” OR “maintenance” OR “remission” OR “loss of diagnosis” OR “relapse” OR “sustained recovery”)	Published from 2000 to June 2026; adult PTSD studies assessed during screening	72

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Scopus	TITLE-ABS-KEY (“PTSD” OR “posttraumatic stress disorder” OR “post-traumatic stress disorder”) AND TITLE-ABS-KEY (“prolonged exposure” OR “cognitive processing therapy” OR “CPT” OR “CPT-SA” OR “EMDR” OR “eye movement desensitization and reprocessing” OR “eye movement desensitisation and reprocessing” OR “trauma-focused CBT” OR “cognitive therapy for PTSD” OR “STAIR” OR “STAIR Narrative Therapy”) AND TITLE-ABS-KEY (“follow-up” OR “long-term” OR “durability” OR “maintenance” OR “remission” OR “loss of diagnosis” OR “relapse” OR “sustained recovery”)	Published from 2000 to June 2026	98
Cochrane Library / CENTRAL	(“PTSD” OR “posttraumatic stress disorder” OR “post-traumatic stress disorder”) AND (“prolonged exposure” OR “cognitive processing therapy” OR “CPT” OR “EMDR” OR “trauma-focused CBT” OR “cognitive therapy for PTSD”) AND (“follow-up” OR “long-term” OR “durability” OR “remission” OR “maintenance” OR “relapse”)	Published from 2000 to June 2026	34
Web of Science	TS=(“PTSD” OR “posttraumatic stress disorder” OR “post-traumatic stress disorder”) AND TS=(“prolonged exposure” OR “cognitive processing therapy” OR “CPT” OR “CPT-SA” OR “EMDR” OR “eye movement desensitization and reprocessing” OR “eye movement desensitisation and reprocessing” OR “trauma-focused CBT” OR “cognitive therapy for PTSD” OR “STAIR” OR “STAIR Narrative Therapy”) AND TS=(“follow-up” OR “long-term” OR “durability” OR “maintenance” OR “remission” OR “loss of diagnosis” OR “relapse” OR “sustained recovery”)	Published from 2000 to June 2026	86
Google Scholar	“PTSD” AND (“prolonged exposure” OR “cognitive processing therapy” OR “EMDR” OR “trauma-focused CBT”) AND (“follow-up” OR “long-term” OR “remission” OR “relapse” OR “durability”)	Supplementary search only*	60
Manual reference-list screening	Reference lists of included studies and relevant reviews were screened manually	Supplementary identification	Not counted separately
Total	—	Duplicate records were removed before title and abstract screening	350

* First 200 most relevant results screened; additional potentially eligible records added.

Additional studies were identified through manual screening of the reference lists of included articles and relevant reviews. Search strings were adapted for each database using controlled vocabulary where available, along with free-text keywords and Boolean operators. Core concepts included PTSD, first-line trauma-focused psychological interventions, and long-term outcomes. The main search structure combined terms for PTSD ("PTSD" OR "posttraumatic stress disorder" OR "post-traumatic stress disorder") with terms for psychological interventions ("prolonged exposure" OR "cognitive processing therapy" OR "EMDR" OR "trauma-focused CBT" OR "cognitive therapy for PTSD") and long-term outcomes ("follow-up" OR "long-term" OR "durability" OR "remission" OR "maintenance" OR "relapse" OR "loss of diagnosis"). No restriction was placed on specific outcome terminology during initial screening to maximize sensitivity. For Google Scholar, the stated query was run in June 2026, and results were reviewed in relevance order. Because of the platform's broad and less reproducible indexing, the first 200 results were screened by title and available snippet; potentially eligible records were examined further and checked against database records before duplicate removal. This supplementary procedure contributed 60 records to formal screening. Duplicate records were removed before title and abstract screening.

Study Selection Process

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Two reviewers independently conducted the study in two stages. First, each reviewer screened titles and abstracts against the predefined eligibility criteria. Second, both reviewers independently assessed potentially relevant full-text articles for final inclusion. Decisions were compared after each stage. Disagreements were resolved by re-examining the eligibility criteria and source report, then reaching consensus through discussion; any unresolvable disagreement was adjudicated by the author. The screening and selection process was documented using a PRISMA flow diagram.

Data Extraction

Data were extracted independently by the same two reviewers using a standardized form capturing: author, year, country, study design, sample size, diagnostic framework, intervention type and format, treatment duration, follow-up timing, and outcomes related to symptom severity, remission status, loss of diagnosis, relapse, recurrence, and functional recovery. The two extraction forms were compared, and discrepancies were resolved by checking the original report and reaching consensus; unresolved discrepancies were adjudicated by the author. Follow-up timepoints were calculated from completion of the active treatment protocol to ensure accurate assessment of post-treatment durability.

Outcome Definitions

Outcome categories were extracted and synthesized separately. Sustained symptom improvement referred to a reduction in continuous PTSD symptom severity that was maintained at follow-up. Symptom-based remission referred to a score below a validated clinical or diagnostic threshold, whereas loss of diagnosis referred specifically to no longer meeting the diagnostic criteria for PTSD; these two categorical outcomes were not treated as equivalent. Functional recovery, relapse, and recurrence were recorded separately according to the definitions used in the original studies. Treatment durability was defined as maintenance of symptom improvement or a remission-related outcome at an assessment conducted ≥6 months after completion of the active psychological intervention. The ≥6-month threshold was selected a priori as a pragmatic minimum interval to distinguish persistence after treatment from immediate or short-term post-treatment response while retaining a sufficient evidence base for synthesis. Studies reporting follow-up anchored to trial initiation were retained only when the intervention duration clearly allowed for a ≥6-month post-treatment interval at the time of assessment.

Quality Assessment

The same two reviewers assessed risk of bias and methodological quality independently using the Cochrane Risk of Bias 2 (RoB 2) tool for randomized controlled trials (11) and the Newcastle–Ottawa Scale (NOS) for non-randomized longitudinal studies (12). The NOS was selected because the eligible non-randomized evidence consisted primarily of cohort-type longitudinal follow-up studies, and the tool evaluates selection, comparability, and outcome ascertainment. ROBINS-I was considered as an alternative domain-based approach; however, because the non-randomized evidence was used descriptively rather than to estimate a pooled causal treatment effect, the NOS was retained. NOS ratings were interpreted as indicators of methodological quality and not as directly equivalent to RoB 2 judgments. RoB 2 judgments were summarized at the study level for long-term PTSD-related outcomes, including symptom durability, symptom-based remission, and loss of diagnosis where reported. Disagreements were resolved by rechecking the relevant tool guidance and source report and then reaching consensus; the author adjudicated unresolved judgments.

Data Synthesis

The feasibility of quantitative synthesis was considered after data extraction. Meta-analysis was not performed because of substantial clinical and methodological heterogeneity in study populations, trauma types, intervention formats, study designs, follow-up durations, outcome measures, and definitions of remission-related outcomes. In addition, too few studies provided sufficiently comparable effect estimates within the same intervention, outcome, and follow-up interval to support a meaningful pooled estimate. Findings were therefore synthesized narratively by intervention and outcome type.

Results

The search identified 350 records: 72 from PubMed/MEDLINE, 98 from Scopus, 34 from the Cochrane Library, 86 from Web of Science, and 60 from supplementary Google Scholar screening. After removal of 68 duplicate records, 282 records

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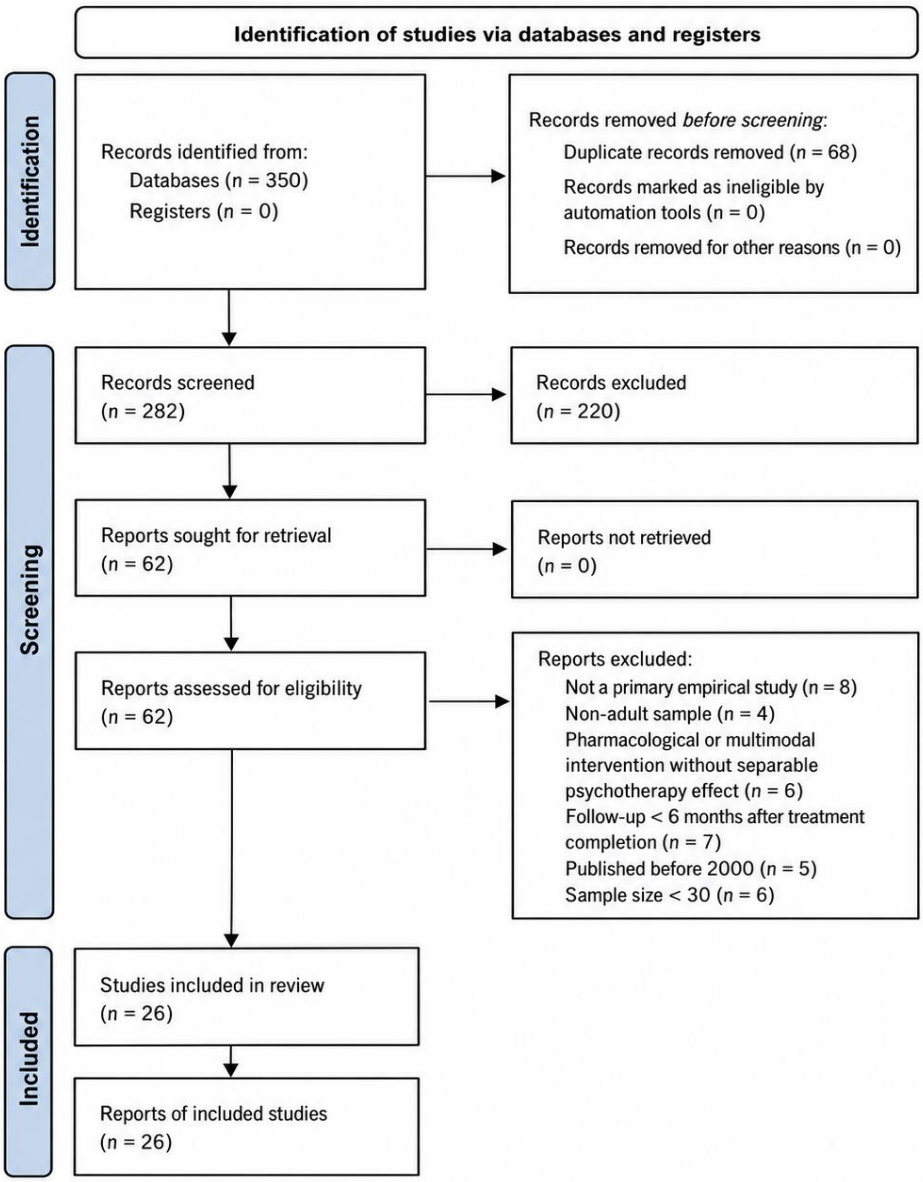
were screened by title and abstract, of which 220 were excluded. All 62 reports sought for retrieval were obtained and assessed in full. A total of 36 full-text reports were excluded: not a primary empirical study (n = 8), non-adult sample (n = 4), pharmacological or multimodal intervention without a separable psychotherapy effect (n = 6), follow-up <6 months after treatment completion (n = 7), publication before 2000 (n = 5), or sample size <30 (n = 6). The remaining 26 primary reports were included in the qualitative synthesis (Figure 1).

The 26 included reports comprised 22 randomized studies assessed with RoB 2 and 4 longitudinal or long-term follow-up studies assessed with the NOS, matching the totals in the PRISMA flow, Tables 3A–3B, and the narrative synthesis. Intervention counts were not mutually exclusive because head-to-head trials and follow-up reports could contribute to more than one category. PE was examined in 14 reports (study-level n = 33–916; follow-up 6 months to 10 years), CPT in 11 reports (n = 60–916; follow-up 6 months to 10 years), EMDR in 4 reports (primary-study N = 74–155; follow-up 6–12 months), and eligible TF-CBT variants in 3 reports (n = 97–121; follow-up 6–9 months). Table 2 presents exact study-level sample sizes, populations, designs, and follow-up periods; participant counts were not summed across intervention categories because several reports included overlapping treatments or follow-up cohorts.



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All included reports provided long-term symptom or diagnostic outcome data. Nine reports presented a categorical remission, loss of diagnosis, or diagnostic persistence (13, 15–17,26, 27, 31, 32, 34). None provided a standardized quantitative estimate of PTSD relapse, recurrence, or functional recovery as a distinct long-term outcome. Outcome definitions varied: some studies reported loss of diagnosis, others used symptom thresholds, and Oprel et al. (26) used a combined criterion of treatment response, loss of diagnosis, and CAPS-5 score <12.

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 Flow Diagram

Table 2. Comprehensive Characteristics and Long-term Findings of Included Studies

Study	Design	Population	Interv./comp.	Follow-up	Main Long-Term Finding	Key Limitation
Schnurr et al. (2022) (13)	RCT; n = 916	Military-related PTSD; DSM-5	PE vs CPT	6 months	PE and CPT both produced clinically meaningful PTSD improvement through 6 months. PE showed statistically greater improvement and higher categorical outcome rates than CPT, but the between-treatment difference did not clearly establish superior sustained remission.	High dropout; categorical outcomes were not prespecified and should be interpreted cautiously.
Resick et al. (2002) (14)	RCT; n = 171	Women with chronic PTSD after rape	CPT vs PE vs minimal attention	9 months	CPT and PE both outperformed minimal attention and showed durable follow-up improvement.	Exact long-term remission proportions could not be derived from the outcomes reported in the published full report.
Resick et al. (2012) (15)	Long-term follow-up of prior RCT	Female rape survivors from the original CPT/PE cohort	Prior CPT or PE	5–10 years	At follow-up, 22.2% of CPT and 17.5% of PE participants still met PTSD diagnostic criteria.	Long-term attrition; no untreated comparator at follow-up.
Resick et al. (2017) (16)	RCT; n = 268	Active-duty military personnel	Individual CPT vs group CPT	6 months	PTSD diagnosis remission at 6 months was 43% for individual CPT and 39% for group CPT.	Military-only sample; residual symptom burden remained in many participants.
Resick et al. (2008) (17)	RCT dismantling study; n = 150	Women with interpersonal violence-related PTSD	Full CPT vs written accounts vs cognitive-only CPT	6 months	At 6 months, PTSD persisted in 25.9% of full CPT, 26.7% of written accounts, and 20.7% of cognitive-only CPT.	CPT-component study rather than standard CPT-only comparison.

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Chard (2005) (18)	RCT; n = 71	Childhood sexual abuse-related PTSD	CPT-SA vs minimal attention	1 year	CPT-SA produced greater PTSD symptom reduction, with gains maintained through 1 year.	Small-to-moderate sample; remission not consistently standardized.
Monson et al. (2006) (19)	Wait-list controlled trial; n = 60	Veterans with chronic PTSD	CPT vs waitlist	6 months	CPT-related PTSD and comorbidity improvements were maintained through 6 months.	Small veteran sample; remission/loss of diagnosis not the main long-term endpoint.
Morland et al. (2014) (20)	Noninferiority RCT; n = 125	Rural veterans with PTSD	CPT-C via videoconferencing vs in-person CPT-C	6 months	Videoconferencing CPT-C was noninferior to in-person CPT-C, with maintained symptom reductions.	Delivery-mode study; categorical remission not emphasized.
Morland et al. (2015) (21)	Noninferiority RCT; n = 126	Women with PTSD	Telemedicine CPT vs in-person CPT	6 months	CPT gains were enduring at 6 months; telemedicine was noninferior to in-person delivery.	Female-only sample; remission not primary endpoint.
Peterson et al. (2022) (22)	RCT; n = 120	Veterans/service members	CPT delivered in-office, in-home, or by telehealth	6 months	Improvement was maintained across delivery formats, with no significant modality differences at 6 months.	Delivery-format trial; not powered for categorical remission.
Simpson et al. (2022) (23)	RCT; n = 101	PTSD with alcohol use disorder	CPT vs assessment-only / relapse-prevention sequence	12 months	PTSD symptoms improved substantially across 12 months, supporting sustained symptom improvement but not formal remission.	Formal remission and loss-of-diagnosis rates were not reported in the published full report.
Foa et al. (2018) (24)	RCT; n = 370	Active-duty military personnel	Massed PE vs spaced PE vs present-centered therapy vs minimal contact	6 months	Massed PE was noninferior to spaced PE; effects were followed through 6 months.	Remission/loss-of-diagnosis outcomes were not foregrounded.
Thorp et al. (2019) (25)	RCT; n = 87	Older veterans with PTSD	PE vs relaxation training	6 months	PE produced large acute improvement, but many gains eroded by 6 months.	Symptom gains decreased by 6 months in this older-veteran sample.
Oprel et al. (2021) (26)	RCT; n = 149	PTSD related to childhood abuse	Standard PE vs intensified PE vs STAIR+PE	6 and 12 months	Loss of diagnosis was 48%–59%; remission was 27%–29% across arms, with no	Loss-of-diagnosis and remission rates differed under the

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					significant between-condition differences.	stringent remission definition.
Peterson et al. (2023) (27)	RCT; n = 234	Combat-related PTSD	Massed PE vs intensive outpatient PE	6 months after treatment	Diagnostic remission at 6 months was approximately 53% for intensive outpatient PE and 52% for massed PE.	Military/veteran sample; intensive formats may limit generalizability.
Dell et al. (2023) (28)	Noninferiority follow-up; n = 138 randomized	Military/veteran PTSD	Massed PE over 2 weeks vs standard PE over 10 weeks	12-month follow-up; approximately 9–11 months after treatment completion depending on arm	Massed PE remained noninferior to standard PE at 12 months, supporting durability of PE gains.	Follow-up was reported relative to the trial follow-up schedule; because active treatment lasted 2–10 weeks, the 12-month assessment still met the ≥6-month post-treatment durability threshold.
Morland et al. (2020) (29)	RCT; n = 175	DSM-5-era PTSD	PE via home telehealth, office telehealth, or in-home in-person	6 months after treatment completion	PE outcomes were maintained across delivery modalities.	Modality comparison rather than treatment-type comparison.
Sele et al. (2023) (30)	RCT; n = 92	DSM-5 PTSD and ICD-11 CPTSD after childhood abuse	PE vs STAIR Narrative Therapy vs STAIR alone	1 year	PE produced greater PTSD symptom improvement at 1 year than the other conditions.	Remission and loss-of-diagnosis outcomes were not reported in the published full report.
Jamil et al. (2026) (31)	Pragmatic longitudinal pilot; n = 33	Adult outpatient PTSD	Intensive PE	6 months	Large symptom reductions were sustained; among participants assessed by CAPS-5 at 6 months, diagnostic loss was common.	Small but above-threshold sample; remission not formally labeled.
Ehlers et al. (2003) (32)	RCT; n = 97	PTSD after motor vehicle accident	Cognitive therapy vs self-help booklet vs repeated assessment	9 months	At follow-up, 11% of cognitive therapy patients still had PTSD vs 61% and 55% in comparator groups.	Trauma-specific and early PTSD sample.
Ehlers et al. (2014) (33)	RCT; n = 121	Chronic adult PTSD	Intensive CT-PTSD vs standard CT-PTSD vs supportive therapy/waitlist	6–9 months	Intensive and standard CT-PTSD achieved comparable recovery, with maintained gains.	CT-PTSD variant rather than PE/CPT/EMDR.

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Bryant et al. (2008) (34)	RCT; n = 118	Adult PTSD	Exposure-based CBT components	6 months	PTSD persisted in 31% of combined exposure plus cognitive restructuring vs higher persistence in exposure-only arms.	Component-based CBT design.
Rothbaum et al. (2005) (35)	Controlled trial; n = 74	Female rape victims with PTSD	PE vs EMDR vs waitlist	6 months post-therapy	PE and EMDR both improved PTSD more than waitlist; no significant PE–EMDR difference at 6 months.	Moderate sample; trauma-specific population.
van der Kolk et al. (2007) (36)	RCT; n = 88	Adults with PTSD	EMDR vs fluoxetine vs placebo	6 months after treatment	EMDR showed substantial and sustained PTSD improvement, especially in adult-onset trauma.	Medication comparator complicates psychotherapy-only interpretation.
van den Berg et al. (2015) (37)	RCT; n = 155	PTSD with psychotic disorder	PE vs EMDR vs waitlist	6 months	PE and EMDR were both superior to waitlist; effects were maintained, with no significant PE–EMDR difference.	Specialized psychosis comorbidity sample.
van den Berg et al. (2018) (38)	Long-term follow-up of prior RCT	PTSD with psychotic disorder	Follow-up after PE and EMDR	12 months	Benefits from PE and EMDR generally endured at 12 months, with no meaningful long-term difference.	No untreated comparator at 12 months; attrition risk.

Abbreviations: PTSD, posttraumatic stress disorder; PE, prolonged exposure; CPT, cognitive processing therapy; EMDR, eye movement desensitization and reprocessing; DSM-5, Diagnostic and Statistical Manual of Mental Disorders; ICD, International Classification of Diseases; RCT, randomized controlled trial; CAPS, Clinician-Administered PTSD Scale; TF-CBT, trauma-focused cognitive-behavioral therapy.

Prolonged Exposure

Fourteen reports examined PE, including military/veteran trials, childhood-abuse-related PTSD studies, delivery-format comparisons, and intensive or massed protocols (13–15, 24–31, 35, 37, 38). In Schnurr et al. (13), both PE and CPT showed clinically meaningful improvement through 6 months; PE had greater symptom improvement and higher categorical outcome rates. Peterson et al. (27) reported loss of PTSD diagnosis in approximately 53% of intensive outpatient PE and 52% of massed PE participants at 6 months. Dell et al. (28) found massed PE noninferior to standard PE at 12 months. In contrast, symptom gains decreased by 6 months in the older-veteran sample of Thorp et al. (25). Oprel et al. (26) reported loss-of-diagnosis rates of 48%–59% and remission rates of 27%–29% across PE-containing arms at 6 and 12 months, with no significant between-condition differences.

Cognitive Processing Therapy

Eleven reports examined CPT across sexual-assault survivor, military/veteran, childhood-abuse, and comorbid PTSD samples (13–23). At 5–10 years, 22.2% of CPT recipients in the Resick follow-up cohort still met PTSD diagnostic criteria (15). At 6 months, remission was 43% for individual CPT and 39% for group CPT in active-duty personnel (16). Symptom improvements were maintained through 6–12 months in studies of CPT adaptations and in-person, videoconferencing, telemedicine, and in-home delivery (18–23). Simpson et al. (23)

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reported sustained symptom improvement through 12 months but did not report formal remission or loss of diagnosis.

Eye Movement Desensitization and Reprocessing

Four reports examined EMDR (35–38). Rothbaum et al. (35) found that PE and EMDR both improved PTSD more than waitlist, with no significant difference between PE and EMDR at 6 months. van der Kolk et al. (36) reported maintained improvement at 6 months, particularly among participants with adult-onset trauma. In participants with PTSD and psychotic disorder, PE and EMDR were superior to waitlist at 6 months, and benefits were maintained at 12 months without a meaningful long-term difference between the two treatments (37, 38).

Trauma-Focused Cognitive-Behavioral Therapy (CBT) Variants

Three reports examined eligible TF-CBT variants (32–34). At 9 months, 11% of cognitive therapy recipients in Ehlers et al. (32) still met PTSD criteria, compared with 61% and 55% in comparator groups. Intensive and standard CT-PTSD produced comparable maintained outcomes at approximately 6–9 months (33). At 6 months, PTSD persisted in 31% of participants receiving combined exposure and cognitive restructuring in Bryant et al. (34), with higher persistence in the exposure-only conditions.

Cross-Intervention Synthesis and Evidence Gaps

Across the 26 reports, sustained symptom outcomes were reported more frequently than symptom-based remission or loss of diagnosis. Reports did not use standardized quantitative definitions for relapse, recurrence, or functional recovery. The number of reports was greater for PE than for CPT, EMDR, or TF-CBT variants, but these counts describe evidence volume rather than comparative treatment effectiveness.

Table 3A. Risk of Bias Assessment of Randomized Studies Using RoB 2

Study	D1	D2	D3	D4	D5	Overall
Schnurr et al. (13)	L	SC	SC	L	L	SC
Resick et al. (14)	SC	SC	SC	SC	SC	SC
Resick et al. (16)	SC	SC	H	L	SC	H
Resick et al. (17)	SC	SC	SC	L	SC	SC
Chard (18)	SC	SC	SC	L	SC	SC
Monson et al. (19)	SC	SC	SC	SC	SC	SC
Morland et al. (20)	SC	SC	SC	SC	SC	SC
Morland et al. (21)	SC	SC	SC	SC	SC	SC
Peterson et al. (22)	SC	SC	SC	L	SC	SC
Simpson et al. (23)	SC	SC	SC	L	L	SC
Foa et al. (24)	SC	SC	SC	SC	SC	SC
Thorp et al. (25)	SC	SC	SC	SC	SC	SC
Oprel et al. (26)	SC	SC	SC	SC	SC	SC
Peterson et al. (27)	SC	SC	H	L	SC	H
Morland et al. (29)	SC	SC	SC	SC	SC	SC
Sele et al. (30)	L	SC	SC	L	SC	SC
Ehlers et al. (32)	SC	SC	L	L	SC	SC
Ehlers et al. (33)	SC	SC	SC	L	SC	SC
Bryant et al. (34)	L	SC	SC	L	SC	SC
Rothbaum et al. (35)	SC	SC	SC	L	SC	SC
van der Kolk et al. (36)	SC	SC	SC	L	SC	SC
van den Berg et al. (37)	SC	SC	SC	SC	SC	SC

Abbreviations: RoB 2, Cochrane risk of bias 2 tool; D1, randomization process; D2, deviations from intended interventions; D3, missing outcome data; D4, outcome measurement; D5, selection of the reported result; L, low risk; SC, some concerns; H, high risk.

Table 3B. Quality Assessment of Long-Term Follow-up and Longitudinal Studies Using NOS

Study	Selection	Comparability	Outcome	Follow-up	Overall

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Resick et al. (15)	G	F	G	F	F
Dell et al. (28)	G	G	G	G	G
Jamil et al. (31)	F	P	G	F	P
van den Berg et al. (38)	G	F	G	F	F

Abbreviations: NOS, Newcastle–Ottawa Scale; G, good; F, fair; P, poor.

Selection refers to cohort definition and representativeness; comparability refers to control of confounding or comparability between groups; outcome refers to outcome assessment quality; follow-up refers to follow-up duration and completeness.

Risk-of-bias and quality-assessment findings are summarized in Tables 3A and 3B. Among the 22 randomized studies assessed using RoB 2 (11), 20 had some concerns and 2—Resick et al. (16) and Peterson et al. (27)—had high overall risk; none had low overall risk. Deviations from intended interventions (D2) generated some concerns in all 22 studies. Some concerns were also frequent for the randomization process (D1; 19/22), missing outcome data (D3; 19/22, with 2/22 at high risk), and selection of reported results (D5; 20/22); outcome measurement (D4) was rated low risk in 13/22 and some concerns in 9/22. Among the 4 studies assessed using the NOS (12), overall quality was good in 1, fair in 2, and poor in 1 (15, 28, 31, 38). Outcome ascertainment was good in all 4, whereas comparability and follow-up completeness were below good in 3/4 studies. These are study-level ratings for long-term PTSD-related outcomes rather than full outcome-specific certainty assessments.

Discussion

This review's distinctive contribution is its focus on outcomes assessed at least 6 months after treatment completion and its joint examination of sustained symptom change, symptom-based remission, loss of diagnosis, relapse, recurrence, and functional recovery. Previous systematic reviews and network meta-analyses have primarily compared treatment efficacy at post-treatment or across mixed follow-up intervals (4–7), whereas other reviews have focused specifically on loss of PTSD diagnosis (8) or recurrence definitions and predictors (9). By integrating these outcome domains across PE, CPT, EMDR, and eligible TF-CBT variants, the present review addresses the durability of treatment effects rather than acute efficacy alone.

Across the 26 included reports, sustained symptom improvement was documented more consistently than categorical remission, loss of diagnosis, relapse, recurrence, or functional recovery (13–38). Follow-up periods ranged from approximately 6 months after treatment to 12 months and, in one cohort, 5–10 years; consequently, the findings represent different levels of durability rather than a uniform long-term endpoint. This distinction matters clinically because reduced symptom severity can provide meaningful benefit while a patient still meets diagnostic criteria or experiences impaired functioning. Likewise, symptom-based remission and loss of diagnosis do not necessarily establish broader recovery, which also requires sustained functional improvement.

PE appeared in more eligible reports than CPT, EMDR, or TF-CBT variants, particularly in recent studies (13–38). This difference reflects the quantity and recency of available evidence, not greater certainty of evidence or superior long-term effectiveness. A larger number of heterogeneous studies cannot compensate for inconsistent outcome definitions, attrition, or risk of bias. Accordingly, the current evidence does not permit a reliable ranking of these psychotherapies according to sustained remission.

Comparisons between interventions are further limited by differences in the populations studied. PE evidence included many military/veteran samples, intensive delivery protocols, and childhood-abuse-related PTSD populations (13, 24–31), whereas CPT studies included sexual-trauma survivors, military personnel, and delivery-format trials (14–23). EMDR evidence included rape survivors and patients with comorbid psychotic disorders (35–38), and TF-CBT variants were evaluated across motor-vehicle-accident-related, chronic, and other adult PTSD samples (32–34). Differences in trauma type, PTSD chronicity, comorbidity, adherence, treatment format, and setting may influence long-term outcomes; therefore, apparent cross-treatment differences may partly reflect case mix rather than the intervention itself.

The risk-of-bias findings reinforce this cautious interpretation. Twenty of the 22 randomized studies had some concerns, and 2 had high overall risk, with frequent concerns regarding deviations from

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intended interventions, randomization reporting, missing long-term data, and selection of reported results (11, 13, 14, 16–27, 29, 30, 32–37). Among the four studies assessed with the NOS, comparability and follow-up completeness were below good in three (12, 15, 28, 31, 38). These limitations increase uncertainty around long-term remission estimates because attrition may selectively remove participants with poorer outcomes, incomplete reporting may obscure unfavorable results, and limited comparability may confound differences between groups. The study-level ratings used here also should not be interpreted as a formal outcome-specific certainty assessment.

Clinically, the findings remain consistent with guidelines recommending trauma-focused psychotherapy for adult PTSD (2, 3), while emphasizing the need to assess outcomes beyond symptom reduction. Post-treatment follow-up should ideally include continuous symptom severity, diagnostic status, and functional outcomes, particularly for patients with chronic PTSD, comorbidity, poor adherence, or previous nonresponse. Because relapse and recurrence were rarely quantified using standardized definitions, the available studies describe their occurrence rather than demonstrating prevention effects.

This review has several strengths, including its focus on adult PTSD, restriction to primary empirical studies, use of a post-treatment durability threshold, and separation of sustained symptom improvement from remission-related outcomes. Several limitations should be acknowledged. First, the protocol was not prospectively registered, although eligibility criteria were established before searching and screening; selective methodological decisions therefore cannot be excluded. Second, restricting inclusion to samples of at least 30 participants may have excluded informative smaller studies and contributed to imbalance across interventions. Third, meta-analysis was not performed because populations, interventions, follow-up timing, measures, and outcome definitions were insufficiently comparable. Fourth, some follow-ups were anchored to trial initiation rather than treatment completion. Fifth, limiting Google Scholar screening to the first 200 results may have missed eligible studies. Sixth, the evidence base was uneven across interventions, and the RoB 2 assessments were study-level summaries rather than full outcome-specific certainty ratings. Finally, heterogeneous definitions of remission, loss of diagnosis, relapse, recurrence, and recovery limited direct comparison.

Future studies should prospectively register protocols; anchor follow-up to treatment completion; use harmonized definitions of remission, relapse, recurrence, and functional recovery; and report both continuous symptom change and categorical outcomes (8,9,13–38). Direct long-term comparisons across trauma-focused psychotherapies should use comparable populations, follow-up intervals, and outcome criteria to permit more reliable comparative conclusions.

Conclusion

Within the substantial clinical and methodological heterogeneity of the included studies, first-line trauma-focused psychotherapies for adult PTSD were associated with sustained symptom improvement beyond treatment completion. PE appeared in more contemporary long-term reports, but this evidence volume does not establish superior effectiveness or certainty compared with CPT, EMDR, or eligible TF-CBT variants. Current evidence does not allow a reliable ranking of these therapies by sustained remission. Evidence is stronger for sustained symptom improvement than for symptom-based remission, loss of diagnosis, or functional recovery, while relapse and recurrence were infrequently reported outcomes and should not be interpreted as evidence of prevention. Future studies should use standardized outcome definitions and follow-up intervals anchored explicitly to treatment completion.

Ethics Approval and Consent to Participate

Not applicable. This systematic review did not involve direct participation of human subjects or access to identifiable personal data.

Consent for Publication

Not applicable.

Data Availability Statement

All data used in this systematic review were extracted from previously published articles and are available from the corresponding author upon reasonable request.

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Author's Contribution

The sole author conceived and designed the study, developed and implemented the search strategy, interpreted the findings, drafted the manuscript, critically revised it, and approved the final version for publication. The author conducted study screening, data extraction, and quality/risk-of-bias assessment with methodological assistance; however, the author was solely responsible for final decisions on study inclusion, extracted data, interpretation of findings, and approval of the final manuscript.

Conflict of Interest

The author declared no conflicts of interest.

Declaration of Generative Artificial Intelligence in Scientific Writing

The author used generative artificial intelligence tools only for language refinement, text organization, and editorial support during manuscript preparation. All scientific content, decisions regarding study selection, data extraction, interpretation of findings, and final manuscript revision were fully conducted and approved by the author.

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