APA CLINICAL PRACTICE GUIDELINE for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults

GUIDELINE UPDATE PANEL FOR THE TREATMENT OF PTSD IN ADULTS

APPROVED BY APA COUNCIL OF REPRESENTATIVES
FEBRUARY 2025

AMERICAN PSYCHOLOGICAL ASSOCIATION

Author Note
Please refer to p. 51 of this guideline for a statement on conflicts of interest as well as p. 55 for acknowledgments.
Correspondence regarding this guideline should be addressed to the American Psychological Association, 750 First Street, NE, Washington, DC 20002-4242, United States. Email: cpg@apa.org.

Suggested Citation
American Psychological Association (2025). *APA Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults*. https://www.apa.org/about/policy/guideline-ptsd-in-adults.pdf

AMERICAN PSYCHOLOGICAL ASSOCIATION

APA CLINICAL PRACTICE GUIDELINE for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults

GUIDELINE UPDATE PANEL FOR THE TREATMENT OF PTSD IN ADULTS
APPROVED BY APA COUNCIL OF REPRESENTATIVES, FEBRUARY 2025

Guideline Update Panel for the Treatment of PTSD in Adults

Lori A. Zoellner (chair)
Department of Psychology,
University of Washington

Priscilla M. Schulz (vice chair)
Seattle, Washington, United States

Lucindra Campbell-Law
Carol and Odis Peavy School of Nursing,
University of St. Thomas-Houston

Daniel V. Foster
Missoula, Montana, United States

Bita Ghafoori
Department of Advanced Studies in Education and Counseling, California State University, Long Beach

Carmen P. McLean
National Center for PTSD, Dissemination and Training Division, VA Palo Alto Health Care System, Menlo Park, California, United States
Department of Psychiatry and Behavioral Sciences, Stanford University

Elana Newman
Department of Psychology,
The University of Tulsa

Nnamdi Pole
Department of Psychology, Smith College

Mark B. Powers
Division of Trauma, Critical Care, & Acute Surgery, Baylor University Medical Center, Dallas, Texas, United States

Barbara Robles-Ramamurthy
TEKU Inc., San Antonio, Texas, United States

Anthony Sgherza
Cabot, Vermont, United States

Murray B. Stein
Department of Psychiatry and School of Public Health, University of California, San Diego

APA Staff

Raquel W. Halfond
Senior Director,
Evidence-Based Practice & Health Equity Practice

Jacob S. Marzalik
Senior Project Manager,
Evidence-Based Practice Practice

TABLE OF CONTENTS

Abstract

The American Psychological Association (APA) developed this updated guideline to provide recommendations on treatments for posttraumatic stress disorder (PTSD) in adults. Highlights of this updated version include two new types of recommendation statements to complement the traditional recommendation statements: implementation considerations (which focus on contextual factors, change processes, and more) and research recommendations (which focus on gaps in the research literature). The updated version also includes information on the diversity of the included participants, discussion of change processes, greater discussion of equity, diversity, and inclusion, and more.

This guideline used methods recommended by the Institute of Medicine's (2011a) report, *Clinical Practice Guidelines We Can Trust.* Those methods are designed to produce guidelines that are based on evidence and patient preferences and are transparent, free of conflict of interest, and worthy of public trust. The guideline used 15 systematic reviews and meta-analyses (compared to the one used in the original guideline) that met the quality criteria for the traditional recommendations. The two new types of recommendations also include other types of literature as well as expert consensus. The guideline update panel (GUP) consisted of health professionals from the disciplines of psychology, psychiatry, social work, and nursing, as well as a community member (patient representative). The GUP made recommendations based on (1) strength of evidence; (2) treatment outcomes and the balance of benefits vs. harms and burdens of interventions; (3) patient values and preferences; and (4) applicability of the evidence to various treatment populations for the traditional recommendations. In selecting which outcomes would be used to judge an efficacious PTSD treatment, the Panel decided that PTSD symptom reduction, loss of PTSD diagnosis, and serious adverse events or harms (e.g., active suicidal intent, serious self-harm, or suicide) were most critical. Of note and unique to this clinical practice guideline (CPG), the Panel further decided to develop additional categories of outcomes that were less critical but still important related to complex presentations and functional outcomes: reduced comorbidity (prevention or reduction of depression, substance use, affect dysregulation, suicidal ideation, or dissociation); clinically meaningful change (response to treatment, PTSD remission, good end state functioning) and maintenance of treatment gains; and quality of life and functioning (quality of life improvement, functional outcomes [e.g., work, social/interpersonal, home, return to work or active duty]). Other harms and burdens of particular treatments were also examined, including dropout, patient and provider burden, potential side effects, and adverse events leading to withdrawals.

It is hoped that this guideline will be used as one piece of evidence-based practice to inform the available evidence to be used together with clinician expertise and patients' values, preferences, and individual characteristics as part of shared decision-making about PTSD treatment to improve lives.

Keywords: posttraumatic stress disorder, PTSD, adults, treatment, clinical practice guideline

Intended Use of Guidelines

This guideline is aspirational in nature and not intended to create a requirement for practice. It is not meant to restrict scope of practice in licensing laws for psychologists or other independently licensed professionals, nor limit coverage for reimbursement by third-party payers. The guideline is also not intended to be used within a legal or judicial context to imply that psychologists or other independently licensed professionals are required to comply with any of its recommendations.

The term "guidelines" refers to statements that suggest or recommend specific professional behavior, endeavor, or conduct for psychologists and may also be useful for other clinicians. They differ from standards in that the latter are mandatory and may be accompanied by an enforcement mechanism. Thus, guidelines are aspirational and intended to facilitate the continued systematic development of the profession and to help assure a high level of professional practice by psychologists. Guidelines are not intended to be mandatory or exhaustive and may not be applicable to every professional and clinical situation. They are not definitive, and they are not intended to take precedence over the judgment of psychologists. Please refer to the APA's (2015) *Professional Practice Guidelines: Guidance for Developers and Users* for a discussion of the several types of guidelines produced by APA. Clinical practice guidelines are an important tool for determining intervention options, but not the only resource.

Clinicians are encouraged to consider the report from the APA Presidential Task Force on Evidence-Based Practice (2006), *Evidence-Based Practice in Psychology,* as well as APA's (2021) *Professional Practice Guidelines on Evidence-Based Psychological Practice in Health Care,* which emphasize the integration of best available research to date; with patient characteristics, culture, and preferences; and clinical expertise when making treatment decisions. In reviewing the recommendation statements, the Guideline Update Panel ("the Panel") reminds the reader that a lack of evidence about a treatment does not imply that a particular treatment is not efficacious. Multiple reasons may account for the findings reported in this document, including (but not limited to) gaps in the literature related to particular treatments or limitations in the specific literature reviewed by the Panel, based on methodological constraints, all of which will be discussed later in the guideline document. Ultimately, when clinicians are developing treatment plans, they are encouraged to do so in a shared decision-making process with the patient in which all relevant information about options is presented to help inform the process.

Advisory Steering Committee Statement on the Evidentiary Bases of Clinical Practice Guidelines

A mission of the Advisory Steering Committee for development of clinical practice guidelines is to guide the field in its efforts to continue developing and disseminating evidence about psychotherapy and other interventions. Clinical practice guidelines represent the state of the literature and leading recommendations to guide high-quality clinical care. This statement is intended to encourage attention toward current evidence while acknowledging the state of psychotherapy science and inherent limitations of our current processes and evidentiary base.
Read the full statement.

Executive Summary

Scope

This guideline provides updated recommendations for the treatment of posttraumatic stress disorder (PTSD) in adults, based on systematic reviews of the scientific evidence. Fifteen (15) systematic reviews and meta-analyses (Almeida et al., 2024; Borgogna et al., 2024; Choi et al., 2020; DeJesus et al., 2024; Hoffman et al., 2018; Hoskins et al., 2021; Illingworth et al., 2021; Jericho et al., 2022; Karatzias et al., 2019; Öst et al., 2023; Roberts et al., 2022; Sijercic et al., 2022; van de Kamp et al., 2023; Williams et al., 2022; Zhang et al., 2023) that were determined to be most relevant to the Panel's scope served as the basis for this guideline. This guideline addresses the efficacy of psychological, pharmacological, augmentation, complementary and integrative treatments, and psychedelics, as well as the comparative effectiveness of psychological, pharmacological, complementary, and integrative approaches, and psychedelics for the treatment of PTSD and complex PTSD in adults. In addition, the guideline addresses the harms and burdens of treatment and patient[1] values and preferences. Evidence for efficacy and comparative effectiveness were reviewed separately; the Panel did not infer efficacy from comparative effectiveness data. The reviews underlying this guideline did not address children and adolescents (ages 18 and younger) with PTSD, people at risk of developing PTSD, and people with subsyndromal PTSD. These topics are important but beyond the scope of this guideline.[2] The Process and Method section details the Panel's decision-making throughout the guideline update process.

It is important to note that "insufficient evidence" indicates that there was not enough high-quality data included in the selected systematic reviews for the Panel to provide definitive recommendations. Insufficient evidence for a given treatment does not mean that there is evidence that the treatment is ineffective. Rather, insufficient evidence can be due to (a) a lack of relevant studies within the time frame of this review, (b) a very small number of relevant studies, (c) a lack of relevant studies conducted by research teams beyond the treatment developer(s), or (d) the reviewed studies were deemed to have inadequate sample size to render a responsible recommendation decision. In addition, the Panel may have concluded that the evidence was "insufficient" even if multiple studies examined a particular intervention if the studies in question did not yield robust (consistent) findings or lacked critical comparisons.

Highlights of this updated guideline include two new types of recommendation statements to complement the traditional ones: implementation considerations (which focus on contextual factors, change processes, and more) and research recommendations (which focus on gaps in the research literature), more information on the diversity of the included participants, discussion of change processes, greater discussion of equity, diversity, and inclusion, and more. The guideline also used 15 systematic reviews and meta-analyses (compared to one used in the original guideline) that met the quality criteria for the traditional recommendations. The two new types of recommendations also include other types of literature as well as expert consensus.

Background

Posttraumatic stress disorder (PTSD) is a significant public health concern due to its severe impact on quality of life and functioning. PTSD is described in the American Psychiatric Association's (2022) *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* (DSM-5, text rev.). PTSD is also described in the World Health Organization's (2019) *International Classification of Diseases for Mortality and Morbidity Statistics* (11th ed.), which distinguishes between a pared-down PTSD and a complex PTSD diagnosis. Regardless of definition, PTSD is characterized by exposure to a potentially traumatic event or events, the development, and persistence of specific trauma-related mental health symptoms beyond initial reactions (defined as several weeks or one month), and functional impairment.

A common human phenomenon, trauma exposure underlies the worldwide 5.6% lifetime prevalence of PTSD, encompassing over 450 million adults and children (Benjet et al., 2016). The greatest achievement of clinical practice guidelines for the treatment of PTSD is their reach and implementation to help resolve symptoms of posttraumatic stress among these millions of individuals around the world. It is hoped that this guideline will be used as one piece of evidence-based practice to inform the available evidence to be used together with clinician expertise and patients' values, preferences, and

1 To be consistent with discussions of evidence-based practice in other areas of health care, we use the term "patient" to refer to the adult, older adult, couple, family, group, organization, community, or other populations receiving psychological services. However, we recognize that in many situations there are important and valid reasons for using such terms as client, consumer, or person in place of "patient" to describe the recipients of services.

2 For more information on treating traumatic stress and PTSD in children and adolescents, please refer to the National Child Traumatic Stress Network and the child and young people section in the United Kingdom's National Institute for Health and Care Excellence 2018 Guideline for PTSD. For an example meta-analysis of pediatric psychological interventions, see Hoppen et al. (2024).

individual characteristics as part of shared decision-making about PTSD treatment to improve lives.

Process and Method

APA develops its clinical practice guidelines (CPGs) in accordance with best practices for guideline development set forth by the former Institute of Medicine (IOM, 2011a; now National Academy of Medicine). Undertaking the creation of a guideline requires several key decisions. APA's Advisory Steering Committee issued a call for nominations (including self-nominations) for individuals to serve as Panel members from a variety of relevant backgrounds (lived experience/patient representative, psychology, psychiatry, social work, nursing) with content knowledge, clinical experience, or methodological expertise. Conflicts of interest (financial and nonfinancial) were considered and managed both during Panel member selection and throughout the guideline update process. The Panel used the Population, Interventions, Comparators, Outcome, Timing, and Settings (PICOTS) framework to formulate the scope of its inquiry. PICOTS is a standard and systematic approach to conducting literature reviews across all fields of evidence-based medicine (Samson & Schoelles, 2012).

In selecting which outcomes would be used to judge an efficacious PTSD treatment, the Panel decided that PTSD symptom reduction, loss of PTSD diagnosis, and serious adverse events or harms [e.g., active suicidal intent, serious self-harm, or suicide] were most critical. The Panel further decided to develop additional categories of outcomes that were less critical but still important: reduced comorbidity [prevention or reduction of depression, substance use, affect dysregulation, suicidal ideation, or dissociation]; clinically meaningful change [response to treatment, PTSD remission, good end state functioning] and maintenance of treatment gains; and quality of life and functioning [quality of life improvement, functional outcomes (e.g., work, social/interpersonal, home, return to work or active duty)]. Other harms and burdens of particular treatments were also examined, including dropout, patient and provider burden, potential side effects, and adverse events leading to withdrawals.

This guideline provides an update to APA's (2017) clinical practice guideline for PTSD in adults;[3] and it was developed in a series of phases, based on 15 systematic reviews and meta-analyses. The Panel began the process by reviewing the PICOTS from the 2017 PTSD guideline, which was adapted from the Agency for Healthcare Research and Quality's (AHRQ; Jonas et al., 2013) systematic review on psychological and pharmacological treatments for PTSD in adults.

The Panel primarily based its recommendations on data found in systematic reviews/meta-analyses of the PTSD treatment literature conducted within five years of the Panel's work. The Panel sought to consider reviews that were judged as "high quality" (e.g., low bias) as determined by meeting Institute of Medicine (IOM, 2011b) or A Measurement Tool to Assess Systematic Reviews-Second Version (AMSTAR-2) quality standards (Shea et al., 2017); however, supplementary systematic reviews with lower quality were included to address important additional outcomes or gaps in the literature base. While this is consistent with rigorous medical intervention guideline development, the Panel noted this approach can have undesirable effects on psychotherapy guideline development because studies exploring the efficacy of psychotherapy are not equally likely to be tested or tested with a similar frequency across forms of psychotherapy, in part, due to potentially less funding for psychotherapy research than pharmaceutical research (e.g., challenges identifying non–self-report/objective, targeted psychotherapy mechanisms often expected to obtain NIMH funding, presence of additional funding for pharmaceutical research from for-profit companies).

The Panel considered four factors as it drafted recommendations based on IOM standards (2011a): (1) overall strength of the evidence; (2) the balance of benefits vs. harms/burdens; (3) patient values and preferences; and (4) applicability breadth or limitations. Based on the combination of these factors, the Panel made a "recommendation" or "conditional recommendation" for or against each particular treatment or concluded that there was "insufficient evidence" to be able to make a recommendation either for or against the specific treatment. These decisions were made for each recommendation in comparison with another specific intervention, treatment as usual, or no treatment. The Panel used a tool called a "Grid" to document its decision-making process for each recommendation statement. This grid can be found in Appendix J (linked separately).

Discussion

The APA guideline is the first update of the previous 2017 guideline for the treatment of PTSD in adults. The guideline has been updated to conform to the updated template from APA's Advisory Steering Committee for development of clinical practice guidelines, which includes two new types of recommendations that are based on expert-consensus as well as based on the literature that may not have met criteria for inclusion in a systematic review or meta-analysis. The first type of recommendations is implementation considerations, which address contextual and other factors in daily clinical practice, and may include the following areas and more relating to implementing treatments:

- Equity, diversity, and inclusion,

3 Members of the 2017 Guideline Development Panel for the Treatment of PTSD in Adults were Christine A. Courtois (chair), Jeffrey Sonis (vice chair), Laura S. Brown, Joan Cook, John A. Fairbank, Matthew Friedman, Joseph P. Gone, Russell Jones, Annette La Greca, Thomas Mellman, John Roberts, and Priscilla Schulz. APA staff for the 2017 clinical practice guideline were Lynn F. Bufka, Raquel Halfond, and Howard Kurtzman.

- Consideration for what patients need to know about informed consent,
- The role of provider and patient factors in treatment for PTSD,
- Barriers to treatment,
- Treatment engagement,
- Monitoring response to treatment,
- Mechanisms of change in treating PTSD, and
- Cultural humility and diversity competence, and other contextual considerations.

The Panel also noted areas where more research is needed on p. 18. These areas include harms and burdens reporting, assessing and defining outcomes of interest, developing systematic reviews and meta-analyses, design and inclusion of clinical trials (e.g., community-based comparative effectiveness research, adaptive trials/MOST, implementation/hybrid trial designs, and qualitative methods), increasing research with diverse populations (e.g., race, ethnicity, socioeconomic status, older adults, disability, sexual orientation, gender identity), and advocacy for increase in research funding to address important gap areas identified by the Panel.

The updated PTSD clinical practice guideline also serves as a companion document to two professional practice guidelines that were recently approved by the APA Council of Representatives as APA policy: APA's (2024a) *Guidelines for Working with Adults with Complex Trauma Histories* ("complex trauma guidelines") and APA's (2024b) *Guidelines on Key Considerations for Working with Adults with PTSD and Traumatic Stress Disorder* ("trauma guidelines"). The trauma guidelines are based on professional literature and expert consensus on issues related to practicing with specific populations with PTSD and traumatic stress disorder. The complex trauma guidelines are also based on the scientific and professional literature on trauma psychology and provide further guidance for treating patients with complex trauma histories.

Treatment Recommendations

In reviewing the recommendations from the Panel, it is important for the reader to be familiar with the definition of several terms as follows:

- **Intervention Names** are based on how they appeared in the systematic reviews, which may differ somewhat from how some interventions might have been named or conceptualized by clinicians in everyday conversation. The Panel notes that the classification of interventions varied across systematic reviews.
- **Treatment as usual (TAU)** refers to the care customarily provided in a particular context. The Panel notes that TAU was inconsistently defined across studies. Thus, comparisons with TAU lack precision.
- **No treatment** means that no active treatment was provided (e.g., waitlist).
- **Efficacy** is defined as the benefit (or lack thereof) of an intervention compared to an inactive control.
- **Comparative effectiveness** is defined as comparing at least two different active treatments to each other to assess the benefits (or lack thereof) of one (or combination) versus the other (or combination).

The recommendations below are organized into the following tiers:

- First-line recommendations are supported by the most high-quality evidence and are worded as **"recommend (Strength/Direction: Strong For)"** or **"recommend against (Strength/Direction: Strong Against),"**
- Second-line recommendations are based on less or weaker evidence and are worded as **"suggests (Strength/Direction: Conditional For) or suggests against (Strength/Direction: Conditional Against)."**
- When there is **"insufficient evidence"** or **"no difference in effect"** to be able to make recommendations for or against interventions, these interventions are listed as **other treatments reviewed** to inform guideline users that there was evidence available about these interventions in the underlying systematic reviews, and that these interventions were considered by the Panel even though the evidence was not yet sufficient to justify a recommendation.

Treatment Recommendations – Psychological Interventions

Level	Recommendation Statement	Strength/ Direction	Rationale
First-Line	For patients with **PTSD**, the Panel **recommends** offering the following psychological interventions **over no intervention or treatment as usual (TAU):** • Cognitive Processing Therapy (CPT) • Prolonged Exposure (PE) • Trauma-Focused Cognitive Behavioral Therapy (CBT)[4]	Strong For	There are many high-quality studies showing large effects for these interventions, which have been conducted by independent research groups using large sample sizes. The pattern of findings across critical outcomes and important outcomes shows high consistency. The strength of the evidence (SOE), based on risk of bias (including study quality), consistency, directedness, precision of the evidence, for these interventions is generally moderate to high. There is a greater logistic and emotional burden to completing these interventions relative to waitlist (and possibly TAU), however, on balance, the degree of benefit to harm/burden strongly favors these interventions over waitlist or TAU.
Second-Line[5]	For patients with **PTSD**, the Panel **suggests** offering the following psychological interventions **over no intervention or TAU:** • Cognitive Therapy (CT) • Eye Movement Desensitization and Reprocessing (EMDR) • Narrative Exposure Therapy (NET)	Conditional For	There are multiple studies with varying methodological quality showing moderate to large effects for these interventions, which have been conducted by independent research groups using large sample sizes. The pattern of findings across critical outcomes is generally consistent. For important outcomes, the pattern of observed effects is either more variable or less information available. The SOE is generally moderate. There is a greater logistic and emotional burden to completing these interventions relative to waitlist (and possibly TAU). On balance, the degree of benefit to harm/burden favors these interventions over waitlist or TAU.

4 Trauma-focused CBT refers to a broad grouping of therapies and not a specific therapy that include elements such as psychoeducation, cognitive restructuring, in vivo exposure, imaginal exposure, or trauma-focused coping and not a specific therapy.

5 Please refer to p. 6 of the guideline document for a description of "first-line" and "second-line" recommendations and for a description of when the panel determines that there is "insufficient evidence" to recommend for or against a specific intervention.

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against the following psychological interventions **over no intervention (WL) or TAU:** • Advocacy/Mentoring • Behavioral Activation Treatment for Depression (BATD) • Brief Eclectic Psychotherapy (BEP) • Emotion-Focused (imaginal confrontation) • Helping to Overcome PTSD through Empowerment (HOPE) • Holographic Reprocessing • Imagery Rehearsal Therapy (IRT) • Interpersonal Psychotherapy (IPT) • Memory Specificity Training (MST) • Metacognitive Therapy (MCT) • Mindfulness Training • Mindfulness-Based Stress Reduction (MBSR) • Neurofeedback Training • Present-Centered Therapy (PCT) • Psychoeducation (PSYED) • Psychodynamic Therapy (PDT) • Relaxation Training • Stress Inoculation Training (SIT) • Trauma Affect Regulation (TAR) • Trauma Management Therapy (TMT) • Written Exposure Therapy (WET)	Insufficient Evidence[6]	Based on research that meets IOM standards and AMSTAR-2 criteria, across interventions, there are varying reasons for insufficient evidence ranging from: lack of multiple, high-quality studies conducted by independent investigators; limited sample sizes; pattern of findings across critical outcomes shows attenuated effects; or variability or less information about important outcomes. The SOE is generally low. There is often a greater logistic or emotional burden to completing these interventions relative to waitlist (and possibly TAU). Information on adverse events and other potential harms was sometimes not reported. There was insufficient evidence to determine the balance of benefits to harms/burdens. At times when a specific-named intervention was singled out, the evidence base weakened. The balance of benefits and harms/burdens was insufficient to make a recommendation on these specific-named interventions. In particular, repackaging of previously well-established interventions that have multiple RCTs also fell into this category.
Other Treatments Reviewed	For patients with **PTSD**, evidence indicates **no difference in effect** between the following interventions and comparators. Thus, the Panel makes **no recommendation** for or against the interventions listed: • WET vs. other active intervention (CPT, CPT + Account, PE)	No difference in effect	Several large trials, conducted by the treatment developer, indicate that WET is as effective as other first-line recommended treatments for critical outcomes. Less is known for important outcomes. The SOE is moderate. WET shows a small advantage in harm/burden relative to the other active interventions. On balance, the degree of benefit to harm/burden is not different between WET and an active comparator. The Panel would like to note that efficacy data reviewed separately above for WET vs. WL or TAU was limited, and, at present, efficacy can be inferred but awaits further replication.

6 Broadly, the term "Insufficient Evidence" refers to the quality standards used in this Guideline. For some therapies listed, there is a substantial amount of relevant evidence from other epistemologies.

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against the following psychological interventions **over another psychological intervention**[7]**:** • **Any Active Intervention:** » EMDR vs. another active intervention (Exposure Alone, Relaxation, Stabilization Treatment) » PE vs. another active intervention (CPT, cognitive restructuring (CR), CT, Imaginal Exposure, EMDR, IPT, MCT, PE+CR, PCT, Relaxation, SIT) » TF-CBT vs. another active intervention (CBT + Supportive Counseling; CPT, EMDR, Exposure Alone, PE, PE + Supportive Counseling, Relaxation, Substance Abuse Treatment, Skills Training in Affective and Interpersonal Regulation [STAIR]) • **Specific Comparisons:** » Dialogical Exposure Therapy (DET) vs. CPT » Dialectical Behavior Therapy (DBT) + PE vs. DBT alone » Family/couples-based intervention vs. individual psychotherapy » IPT vs. relaxation » Memory Specificity Training (MST) vs. CPT » Relaxation training vs. CR » Trauma Management Therapy (TMT) vs. Exposure Alone	Insufficient Evidence[8]	Based on research that meets IOM standards and AMSTAR-2 criteria, across interventions, there is varying reasons for insufficient evidence ranging from: lack of replication across multiple, high-quality studies conducted by independent investigators; lack of examination of important outcomes and long-term maintenance; and limited sample sizes or power to detect differences between interventions or noninferiority. The SOE is generally low. There was insufficient evidence to determine the balance of benefits to harms/burdens. The Panel would like to note that some of the treatments in comparative effectiveness trials indeed are first-line treatments (compared to no treatment or treatment as usual) per the updated guideline. However, when compared to other active, trauma-focused treatments – and in the comparisons listed here – there is insufficient evidence to indicate that one is more effective than the other.

7 The treatments listed in this section are not a comprehensive list of all potential existing treatments for which there is insufficient evidence, only those specifically included in the systematic reviews/meta-analyses reviewed by the panel.

8 See "Footnote 6."

Treatment Recommendations – Pharmacological Interventions

Level	Recommendation Statement	Strength/ Direction	Rationale
Second-Line	For patients with **PTSD**, the Panel **suggests** offering the following **medications:** • Selective Serotonin Reuptake Inhibitors (SSRIs): » fluoxetine » paroxetine » sertraline • Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs): » venlafaxine	Conditional For	There are multiple studies showing generally consistent small to moderate effects for these interventions. For important outcomes, the pattern showing efficacy was either more variable or there was less, or no information reported. The SOE is generally moderate, though low for important outcomes. There are greater logistic and potential side effects in receiving these interventions relative to placebo, however, on balance, the degree of benefit to harm/burden favors these interventions over placebo.

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against the following **medications:** • Alpha-Adrenergic Blockers: » prazosin • Anticonvulsants/Mood Stabilizers: » divalproex » lamotrigine » tiagabine • Antipsychotics: » aripiprazole » olanzapine » quetiapine » risperidone » ziprasidone • Atypical Antidepressants: » mirtazapine • Hypnotics: » eszopiclone • Monoamine Oxidase Inhibitors (MAOIs): » brofaromine » phenelzine • Norepinephrine and Dopamine Reuptake Inhibitors (NDRIs): » bupropion • Serotonin Antagonist and Reuptake Inhibitors (SARIs): » nefazodone • SSRIs: » citalopram • Tricyclic Antidepressants (TCAs): » amitriptyline » desipramine » imipramine • Other Individual Medications Reviewed (augmentation): » d-cycloserine augmentation » eszopiclone augmentation » prazosin augmentation » risperidone augmentation » topiramate augmentation • Other Individual Medications Not Commonly Used: » ganaxolone » nepicastat » orvepitant	Insufficient Evidence[9]	Based on research that meets IOM standards and AMSTAR-2 criteria, across interventions, there is varying reasons for insufficient evidence ranging from: lack of multiple, high-quality studies; limited sample sizes; pattern of findings across critical outcomes shows attenuated effects; or variability or less information about important outcomes. The SOE is generally low. There is often a greater logistic or side effect profiles with these interventions relative to placebo. When additional drugs within a class are not listed, the reasons were either that quality trials were not included in the systematic reviews that were reviewed, or no RCTs existed. There was insufficient evidence to determine the balance of benefits to harms/burdens.

9 Broadly, the term "Insufficient Evidence" refers to the quality standards used in this Guideline. For some therapies listed, there is a substantial amount of relevant evidence from other epistemologies.

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against the following medications **over another medication:** • Norepinephrine Reuptake Inhibitors (NRIs): » reboxetine (NRI) vs. fluvoxamine (SSRI) • SARIs: » nefazodone (SARI) vs. sertraline (SSRI) • SNRIs: » venlafaxine (SNRI) vs. sertraline (SSRI) • SSRIs: » sertraline (SSRI) vs. citalopram (SSRI)	Insufficient Evidence[10]	Based on research that meets IOM standards and AMSTAR-2 criteria, across interventions, there is varying reasons for insufficient evidence ranging from: lack of multiple, high-quality studies; limited sample sizes; pattern of findings across critical outcomes shows attenuated effects; or variability or less information about important outcomes. The SOE is generally low. There are often greater logistic or side effect profiles with these interventions relative to placebo. There was insufficient evidence to determine the balance of benefits to harms/burdens. The Panel notes that reboxetine is not approved for use in the United States (Page, 2003).
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against **SSRIs as a class** over **psychological therapy.**	Insufficient Evidence[11]	Based on research that meets IOM standards and AMSTAR-2 criteria, there is a lack of multiple, high-quality, well-powered studies comparing SSRIs to psychotherapy interventions. The SOE is generally low. There was insufficient evidence to determine the balance of benefits to harms/burdens of SSRIs as a class versus psychotherapy as a class.

Not Recommended – Medications for PTSD

Level	Recommendation Statement	Strength/ Direction	Rationale
Second-Line	For patients with **PTSD**, the Panel **suggests against** offering the following **medications:** • Anticonvulsant/Mood Stabilizer: » topiramate • Benzodiazepine: » alprazolam	Conditional Against	There are multiple studies showing generally no difference in effects on critical outcomes. The pattern for important outcomes also generally shows no benefit over placebo or does not include information about important outcomes. The SOE is generally low. There are greater logistic and potential side effects in receiving these interventions relative to placebo. On balance, the degree of benefit to harm/burden favors placebo over the listed interventions.

10 See "Footnote 9."

11 See "Footnote 9."

Treatment Recommendations – Complementary and Integrative Health Interventions

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against the following **body- and movement-oriented interventions:** • Applied Relaxation • Bathysmed® Meditative Diving • Exercise (supervised moderate to vigorous; stretching/toning) • Exercise + TAU • Group Cognitively Based Compassion Training • Group Yoga • Group Trauma-Sensitive Yoga • Hatha Yoga • Somatic Experiencing • Sudarshan Kriya Yoga • Sudarshan Kriya Yoga (modified) • Trauma-informed Yoga • Yoga Breath Intervention	Insufficient Evidence[12]	Based on research that meets IOM standards and AMSTAR-2 criteria, this heterogeneous group of interventions showed efficacy on some critical outcomes, relative to a heterogeneous group of comparators. However, there was a high degree of variability in the pattern of findings and insufficient information on important outcomes. Many studies were small, relied on self-report, and information about maintenance of gains was limited. The SOE was low. Information on harms/burdens was limited and showed comparable dropout. There was insufficient evidence to determine the balance of benefits to harms/burdens.

12 Broadly, the term "Insufficient Evidence" refers to the quality standards used in this Guideline. For some therapies listed, there is a substantial amount of relevant evidence from other epistemologies.

Treatment Recommendations – Psychedelic Interventions

Level	Recommendation Statement	Strength/ Direction	Rationale
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against **ketamine** over an **active** intervention (e.g., assessment) or an **inactive** intervention (e.g., no treatment)	Insufficient Evidence[13]	Based on research that meets IOM standards and AMSTAR-2 criteria, interventions lacked multiple, large, high-quality studies and information about maintenance of gains is limited. Findings on critical outcomes were variable. The SOE was low. There is minimal burden, but some risk of harm. There was insufficient evidence to determine the balance of benefits to harms/burdens.
Other Treatments Reviewed	For patients with **PTSD**, there is **insufficient evidence** for the Panel to recommend for or against **3,4-Methylenedioxymethamphetamine (MDMA)-assisted Psychotherapy** over an **inactive** (i.e., lactose) or **active** (i.e., 30–40 mg of MDMA or 25 mg of MDMA followed 2.5 hours later by 12.5 mg MDMA) intervention.	Insufficient Evidence[14]	Based on research that meets IOM standards and AMSTAR-2 criteria, available findings showed efficacy relative to placebo at immediate posttreatment, but there was a lack of multiple, high-quality studies, limited sample sizes, variability in MDMA dosing, heterogeneity in comparators, and limited data on important outcomes. The SOE was low. There was evidence of moderate risk of harm and burden. There was insufficient evidence to determine the balance of benefits to harms/burdens. The Panel notes that MDMA-assisted psychotherapy was not approved by the FDA for PTSD and is only available for research purposes or available illegally (Ault & Burton, 2024; Lykos Therapeutics, 2024).

13 Broadly, the term "Insufficient Evidence" refers to the quality standards used in this Guideline. For some therapies listed, there is a substantial amount of relevant evidence from other epistemologies.

14 See "Footnote 13."

Treatment Recommendations – PTSD and Substance Use Disorder (SUD)

Level	Recommendation Statement	Strength/ Direction	Rationale
First-Line	For patients with **PTSD and comorbid substance use disorder (SUD)**, the Panel **recommends** offering the following **trauma-focused treatments plus TAU for SUD vs. TAU intervention for SUD only:** • Trauma-Focused CBT » Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE) » PE + TAU for SUD » Trauma-Focused CBT + TAU for SUD	Strong For	There was evidence of significant benefit for the interventions on critical outcomes and several important outcomes. SOE was moderate. There was no evidence of differential harm/burden. The balance of benefits to harms/burdens strongly favors trauma-focused treatments plus TAU for PTSD and SUD over TAU for PTSD SUD.
Other Treatments Reviewed	For patients with **PTSD and comorbid SUD**, there is **insufficient evidence** for the Panel to recommend for or against the following interventions **over another intervention:** • Brief cognitive restructuring (CR) training vs. brief experiential acceptance training • COPE + TAU vs. Seeking Safety + TAU • Creating Change vs. Seeking Safety[15] • Integrated CBT (ICBT) + TAU for SUD vs. TAU for SUD only • Motivational Enhancement Therapy (MET) then PE vs. MET + PE • Incentivized PE w/ voucher + TAU for SUD vs. Standard PE w/o voucher + TAU for SUD	Insufficient Evidence[16]	Based on research that meets IOM standards and AMSTAR-2 criteria, interventions lacked multiple, large, high-quality studies conducted by independent research teams. The pattern of findings across critical outcomes showed variability (e.g., no differences at posttreatment or a small effect that attenuated at follow-up), and findings on important outcomes were absent or inconsistent. The SOE is generally low. Information on harm/burden was limited or showed no difference. Often harms and burden information was not available. There was insufficient evidence to determine the balance of benefits to harms/burdens.
Other Treatments Reviewed	For patients with **PTSD and comorbid SUD**, evidence indicates **no difference in effect** on PTSD symptoms or substance use for the following interventions **over a TAU for SUD intervention.** Thus, the Panel makes **no recommendation** for or against the following interventions listed: • Seeking Safety • Seeking Safety plus TAU (for SUD)	No difference in effect	Findings indicate no difference in effect for critical outcomes, no information, or unclear effect on important outcomes. There was no evidence of differential harms/ burdens although there is variability in the TAU category. The balance of benefits to harms/burdens is the same for seeking safety as control.

15 The review by Roberts and colleagues (2022) labeled these treatment comparisons as "Creating Change plus TAU for SUD vs. Seeking Safety plus TAU for SUD."

16 Broadly, the term "Insufficient Evidence" refers to the quality standards used in this Guideline. For some therapies listed, there is a substantial amount of relevant evidence from other epistemologies.

Implementation Considerations

The following implementation considerations are based on expert consensus or review of unrestricted scholarly literature, including observational studies. Thus, the information presented below was obtained through a less rigorous process. Nonetheless, it aims to capture current professional wisdom.

- Providers are encouraged to remember that trauma exposure does not necessarily mean that an individual will develop PTSD or another form of post-trauma mental health problems. The modal response after trauma exposure is resilience or natural recovery over time (e.g., Galatzer-Levy et al., 2018). Indeed, many individuals report experiencing posttraumatic growth (e.g., Jayawickreme et al., 2021). Providers are encouraged to promote and foster resilience.
- Providers are encouraged to practice cultural humility, which includes being mindful of patients' beliefs, practices, and values and to provide culturally competent services in the context of the current guideline recommendations (Bryant-Davis et al., 2019).
- Providers are encouraged to carefully consider intersecting identities in understanding the impact of trauma and the role of racial trauma (Bryant-Davis et al., 2019). When treating adults with PTSD, clinicians are strongly encouraged to consider and assess the relevance of key and intersecting identities such as age, race, ethnicity, class, gender, sexual orientation, disability, religion, immigration status, refugee or asylum seeker status, etc. These factors might lead to adaptations of the treatments recommended in these guidelines in ways that could enhance treatment acceptability and effectiveness (e.g., Ennis et al., 2020).
  - » When treating adults with PTSD who identify as Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Two-Spirit, Intersex, Asexual, and other identities that fall outside the cisgender and heterosexual paradigms (LGBTQIA2s+), People of Color, or having physical or cognitive disabilities, clinicians are strongly encouraged to explore the potential role of racial, historical, generational, and structural trauma on the individual's experience of PTSD (e.g., Sanders et al., 2024) and how intersecting identities may compound their impact (Bryant-Davis et al., 2019). Because DSM-5 does not specifically name such events as Criterion A Trauma contributor to PTSD, they are often overlooked by mental health professionals. Yet, emerging scholarship and empirical evidence suggest that these factors can be associated features of PTSD and sometimes contributors to PTSD and its effects on the therapeutic alliance, treatment engagement, selection, and adaptation of treatment (e.g., Allwood et al., 2021; Gone et al., 2019; Lowe, 2024; McClendon et al., 2020).
  - » When treating adults with PTSD, clinicians are also encouraged to consider the potential impact of discrimination on treatment decisions (e.g., Williams et al., 2020). For example, empirical evidence suggests that clinicians have overlooked PTSD in Black patients and misdiagnosed it as depression or psychotic disorder (Bell et al., 2015a & b; Jegarl et al., 2023). Such misdiagnosis will likely result in failure to offer empirically supported PTSD treatments.
  - » When considering adaptation of interventions both inside and outside the guideline, it is important to consider whether cultural adaptations are necessary and if so, how effective elements of the treatment are adapted to meet the patients' needs (Cook et al., 2014).
  - » The Panel encourages consideration of the age of the patient as older patients may respond less effectively to medications due to age-related changes and increased sensitivity to side effects. The literature supports an individualized approach, recommending trauma-focused psychotherapy as a first-line treatment, with SSRIs or SNRIs for those who prefer medication (VA/DoD, 2023). The guideline also cautions against benzodiazepines due to risks like sedation, cognitive impairment, and falls, aligning with broader evidence on their harmful effects in older adults (Hoffman et al., 2018; Moye et al., 2014; Olfson et al., 2015).
- The Panel strongly encourages clinicians to recognize the individual and systemic barriers to receiving evidence-based care, including but not limited to the patient's access to reliable transportation, costs of treatment, stigma, internet access [for telehealth visits], language, culture, etc.
- It is important that clinicians with prescriptive authority pay attention to the patient's medical history before prescribing psychotropic medications for treating PTSD. The recommended medications are also intended as a starting point only, and psychologists should use their own clinical judgment and consider each patient's medical history and individual circumstances before making any treatment decisions.
- Given the common heterogeneity and high diagnostic

comorbidities seen in PTSD, clinicians are encouraged to evaluate trauma history, including adverse childhood experiences, and comorbidities comprehensively and to engage in shared decision-making that considers these factors yet maintains the structure

  - » Clinicians are encouraged to assess for and track prior and ongoing trauma exposure (e.g., Life Events Checklist for DSM-5 [LEC-5], Weathers et al., 2013), PTSD symptoms, comorbid conditions, and associated problems (e.g., depression, substance use, anger, guilt, perhaps especially suicide and self-harm risk) using a standardized tool validated for use in populations that match with the patient (e.g., Patient Health Questionnaire-9 [PHQ-9], Kroenke et al., 2001). These comorbidities may complicate or prolong the course of PTSD and/or necessitate additional safety monitoring.
  - » When a patient presents with PTSD as the primary diagnosis along with a substance use disorder, providers are encouraged not to delay implementing an evidence-based treatment for PTSD (Roberts et al., 2022), in the absence of a clear clinical contraindication, such as the need for acute detoxification, and with the caveat that the clinician has appropriate substance-focused training, clinical supervision, or is working in the context of a team specializing in substance use disorders.

- Clinicians are encouraged to seek proficiency in evidence-based interventions for the treatment of PTSD.
  - » Clinicians are encouraged to obtain case consultation/supervision to support the implementation of evidence-based treatments following didactic (e.g., workshop) training (e.g., Ghafoori et al., 2023; Foa et al., 2020).
- The Panel encourages clinicians to consider the critical role of a strong therapeutic alliance as well as the importance of harnessing key change processes in treating patients with PTSD, complex PTSD, and comorbid substance use and PTSD (e.g., Baier et al., 2020; Howard et al., 2021).
  - » Clinicians are encouraged to be aware of their assumptions and beliefs about trauma, recovery, and how these can affect the therapeutic relationship, treatment selection, and implementation (Cook et al., 2014). Clinicians are encouraged to provide patients with standardized information about their PTSD treatment options, to support patient preferences, and to utilize shared decision-making in selecting an intervention, including when that means a referral (Windle et al., 2020).
  - » Clinicians are encouraged to develop a collaborative relationship with their patients. This often means not only understanding the patients' needs, concerns, values, and expectations, but also, unambiguously addressing these areas early in treatment (i.e., through shared decision-making and developing a therapeutic alliance). Since trauma exposure often affects survivors' sense of safety and trust, clinicians may have to invest more attention to enhancing the patient's perception of psychological and physical safety (Cook et al., 2014).
- Health and mental health care systems need to be mindful of the depth of training clinicians need to receive in trauma-specific interventions. It is important that clinicians acknowledge the limitations of their training so that appropriate referrals can be provided. Some clinicians are uncomfortable with or unskilled in leading patients in processing trauma memories. In such cases, clinicians are encouraged to receive adequate training in these specific techniques. It is recommended that institutions assess clinical training and support clinicians in advancing their training (e.g., protected time for consultation), and future implementation research is needed on the effectiveness of various training models in regard to the treatment of PTSD.
- Health and mental health care systems also may want to pay attention to cost and cost-effectiveness data when considering the modality of treatment (e.g., group versus individual, telehealth).
- Health and mental health care systems also need to be mindful of clinician burnout, secondary traumatic stress, vicarious trauma, and compassion fatigue, as this plays a significant role in the quality of care (Garcia et al., 2019). Empathy-based stress reactions have been found to be more common among some health care professions, and routine monitoring of clinician health and well-being is recommended (Rauvola et al., 2019).
- When considering alternative/integrative medicines both inside and outside of the guideline, it is important to consider the scientific and theoretical plausibility of the intervention strategies (e.g., Lilienfeld, 2011; Lynn et al., 2023).

Recommendations for Research

Harms and Burdens Reporting

- The Panel recommends systematically monitoring and consistently reporting adverse and severe adverse events using standardized definitions of adverse events and severe adverse events, especially in psychotherapy trials.
- The Panel recommends systematically assessing and reporting reasons for dropouts, including paying attention to dropouts due to adverse events and dropouts due to early improvement in treatment.
- More research is needed on potential harms and burdens, or benefits, of PTSD treatments with individuals exposed to or at risk for ongoing trauma.

Assessing and Defining Outcomes

- The Panel recommends using masked structured interview assessments as the primary way to assess treatment outcomes.
- The Panel recommends developing a standardized definition of "clinically meaningful change" and other important outcomes.
- The Panel encourages researchers to collect follow-up data, including longer-term follow-up (e.g., five-year follow-up) in addition to one-, three-, six-, and 12-month follow-up periods.

Developing Systematic Reviews/Meta-Analyses

- The Panel recommends incorporating other types of clinical trials in systematic reviews/meta-analyses (e.g., community-based comparative effectiveness research, adaptive trials/MOST, implementation/hybrid trial designs, and qualitative methods).
- The Panel recommends that systematic review/meta-analytic authors aspire to meet the Cochrane and AMSTAR-2 requirements for developing high-quality systematic reviews of health care interventions.
- The Panel recommends that systematic reviewers and meta-analysts maintain the original intervention names when reporting results (even if different interventions are aggregated into larger categories such as "CBT"). This might permit future guideline panels and clinicians' greater clarity in applying findings to clinical practice.
- The Panel recommends that individual clinical trial researchers and systematic review authors consistently calculate pre-post effect sizes and relative effect sizes and provide the equations that were used to perform the calculations.
- The Panel recommends that systematic reviews and future guideline development panels carefully consider how best to meaningfully aggregate comparative effectiveness data, specifically across superiority, equivalence, and noninferiority trials, and define *a priori* under what specific circumstances efficacy can be inferred from comparative effectiveness data, especially in the absence of or limited number of efficacy trials.
- The Panel recommends standardizing the definition of "quality of life." It also recommends standardizing other important outcomes where there were gaps in the systematic reviews that served as the underlying evidence for treatment recommendations (e.g., complex PTSD outcomes, substance use, affect dysregulation, suicidal ideation, dissociation).
- The Panel recommends that meta-analyses and systematic reviews incorporate analyses to examine moderating factors such as demographic variables predicting outcomes when possible, and, when inclusion criteria do not include a PTSD diagnosis, including sub-analyses of trials that selected participants based on initial PTSD diagnosis to support potential inclusion in guideline development.
- The Panel recommends the development of large, "BIG data," combined trial datasets, including potential moderators and mediators of change.

Designing Clinical Trials

- The Panel recommends that future clinical trials follow CONSORT reporting standards and clearly specify how the intervention would be classified within the larger literature (UK EQUATOR Centre, n.d.).
- The Panel recommends standardizing definitions for treatment as usual, waitlist, and nonspecific interventions that are used as control conditions. Alternatively, the field would benefit from norms about reporting details of these comparison interventions so that future guideline panels can determine whether and to what extent patients in these conditions are receiving an active intervention.

- The Panel recommends masking/blinding of assessors throughout randomized controlled trials, from initial intake to long-term follow-up. Further, the Panel recommends that trials collect data in a manner that allows for bridging the current DSM-5 PTSD and ICD-11 C-PTSD symptom chasm in outcomes reporting.
- There is a need for more well-powered comparative effectiveness research that can compare (i.e., psychotherapy vs. another psychotherapy intervention; pharmacotherapy vs. pharmacotherapy; psychotherapy vs. pharmacotherapy). Better guidelines/standardization for defining confidence intervals reflecting no difference is needed. Often, differences between active interventions are generally small or measurement imprecise, necessitating large samples to detect such differences. Large samples generally require more funding, which means that funding agencies will need to make greater investments in such work. Given that first-line treatments for PTSD are psychotherapies (rather than pharmacotherapies), the funding for this effort will likely come from federal sources.
- The Panel recommends unifying descriptors and data so that systematic review authors will be able to parse and summarize data in clinically meaningful ways.
- Understudied PTSD interventions commonly used in the field or of high public interest but not represented in RCTs and systematic reviews need special attention to determine the barriers to inclusion in the research literature and the methods to address this (e.g.,supporting and incentivizing clinical trials that assess psychodynamic treatments for PTSD and internal family systems therapy interventions). Similarly, psychotherapy-assisted interventions such as cannabis, psilocybin, and MDMA will benefit from high-quality clinical trials. Neither cannabis nor psilocybin, either alone or in combination with psychotherapy, had sufficient high-quality RCTs to be evaluated in the existing systematic reviews included in this guideline and cannot be recommended, at present, as a treatment for PTSD.

Equity, Diversity, and Inclusion

- The Panel recommends that researchers consider the role of social determinants of health as a potential role in patients' quality of life after receiving the intervention.
- The Panel recommends increasing the diversity of research settings beyond outpatient, specialty mental health settings, such as community-based settings (e.g., religious and spiritual centers, community health centers, rape crisis centers, senior centers), military, criminal justice, partial hospitalization, and refugee camps.
- The Panel recommends inviting community representatives to be involved in the development of future studies on adapting or implementing evidence-based treatments that align with the patients' cultures.
- The Panel recommends more research on the effectiveness of lay individuals serving as providers, as the current research in this area is limited largely to refugee camp settings (e.g., Hinton et al., 2009; Neuner et al., 2008).
- The Panel recommends that future systematic reviews and meta-analyses conduct sub-analyses by demographic factors, incorporating the role of diversity and intersectionality (including racial/ethnic, religious identities, socio-economic status, and age) in the type and amount of evidence-based treatment received and outcome, as well as incorporating the role of settings (e.g., telehealth, group settings, refugee camps, conflict zones, low- and middle-income countries). Factors such as ethnic match and cultural adaptation (or lack thereof) may affect early termination and/or therapy outcomes (Kline et al., 2020). Routine reporting of any demographic differences in treatment utilization or outcomes would be valuable for future meta-analysts.
- The Panel recommends that clinical practice guidelines for the treatment of PTSD in children and adolescents be pursued in the future.

Advocacy

- The Panel recommends that trainees and investigators receive support to attend training, ongoing consultation, and collaborative learning and coaching in conducting high-quality research that meets international standards (e.g., Cochrane, National Institutes of Health).
- More funding is needed for research that addresses gaps in the applicability of treatment recommendations, including "who does the treatment work for, when does the treatment work, and in what circumstances does the treatment work?"
- More funding is needed to support research on treatment effectiveness for individuals who identify as Black/Latino/a/e/x/Indigenous/Other Underrepresented People of Color, sexual and gender diverse, or individuals with physical or cognitive disabilities.
- The Panel encourages collaborations across community agencies, nonprofit organizations, and academic partners to support research on community-based interventions.

Background and Justification: The Scope of the Problem

Definition of the Problem

Posttraumatic stress disorder (PTSD) is a mental health disorder that may manifest in individuals who have encountered or been exposed to traumatic events (American Psychiatric Association, 2022). This condition is characterized by a range of psychological and emotional symptoms that can have a profound and lasting impact on an individual's well-being. PTSD is a widespread mental health concern that affects a substantial portion of the global population, although the precise prevalence can vary due to factors such as the studied population and the type of trauma under consideration. A significant challenge associated with PTSD is the underdiagnosis and misdiagnosis of the disorder, as many individuals experiencing PTSD symptoms may not seek professional assistance, and health care providers may not consistently identify the condition (Goldstein et al., 2016).

PTSD can develop in response to profoundly distressing events that exceed typical stressors. These events encompass a broad spectrum, including military combat, sexual and/or physical assault, domestic violence, interpersonal violence, intimate partner violence, torture, natural and human-made disasters, accidents, and childhood abuse, medical traumas, and chronic medical conditions among others (American Psychiatric Association, 2022). Traumatic events are not uncommon; approximately half of all adults in the United States alone will encounter at least one traumatic incident in their lifetime (American Psychiatric Association, 2022). The severity and duration of the trauma can vary widely, resulting in different presentations of PTSD.

The majority of individuals exposed to trauma do not develop PTSD. However, those afflicted with PTSD may endure persistent and distressing memories of traumatic events, contend with disrupted sleep patterns, experience feelings of disconnection or emotional numbness, and display heightened startle responses. In severe cases, PTSD can significantly impair a person's ability to function effectively in their professional, personal, and social life (Merians et al., 2023). PTSD is characterized by 20 symptoms across four symptom clusters, specifically: intrusions (intrusive thoughts, flashbacks, nightmares); avoidance; adverse changes in mood and cognition; and hyperarousal. PTSD can exert a substantial impact on an individual's daily life, relationships, and overall well-being, often co-occurring with other mental health conditions like depression and substance abuse (American Psychiatric Association, 2022).

In the aftermath of trauma exposure, especially exposures of long duration and/or in circumstances of particular psychological vulnerability (i.e., torture, or early childhood trauma involving neglect, physical and emotional abuse, and sustained exposure to dysfunctional family environments) the post trauma, psychological burden may be quite heavy and tenacious (Bryant, 2019). The Complex PTSD diagnosis in the World Health Organization's (2019) ICD-11 is one approach to capturing this presentation of psychological burden post trauma. The ICD-11 includes both a "simple" and Complex PTSD diagnosis (PTSD and C-PTSD, respectively). In the ICD-11, PTSD is comprised of only three symptoms (re-experiencing, avoidance, and persistent sense of threat); this distinguishes the ICD-11 PTSD from the DSM-5 PTSD diagnosis; they are not the same, with DSM-5 PTSD diagnosis having twenty symptoms. In the ICD-11, Complex PTSD requires that patients not only meet criteria for the ICD-11 PTSD but also suffer disturbances of self-identity, emotion dysregulation, and persistent difficulties in relationships. The additional symptoms have a lasting and profound influence on a person's quality of life, capacity to establish healthy relationships, and one's ability to sustain stable employment and foster a sense of self-worth.

The inclusion of C-PTSD, otherwise termed Disorders of Extreme Stress Not Otherwise Specified (DESNOS), was carefully considered and rejected from inclusion from both the DSM-IV and DSM-5 (Friedman et al., 2011; Friedman et al., 2021); it was viewed as a severe form of PTSD rather than a substantially different disorder. Thus, C-PTSD is not officially recognized as a diagnosis in the DSM-5. However, DSM-5 added additional symptoms to the PTSD diagnosis; notably, irritability and angry outbursts, reckless or self-destructive behavior, and negative alterations in cognition and mood [e.g., self-blame]. These additional symptoms were intended to capture some of the overlap across constructs. Nevertheless, there is a chasm between the DSM-5 PTSD and ICD-11 C-PTSD.

The diagnosis of C-PTSD may pose special clinical challenges, such as incorporating safety and stabilization techniques and other methods tailored to address the distinct symptoms and complexities associated with complex PTSD (Larsen, n.d.). In both PTSD and C-PTSD cases, initiatives aimed at raising awareness, reducing stigma, improving diagnostic and treatment options, and enhancing support systems are fundamental steps in addressing the challenges associated with these conditions (Merians et al., 2023).

Although the Panel was tasked with updating APA's (2017) clinical practice guideline for DSM-5 PTSD, the Panel chose to also examine important outcomes related to C-PTSD (i.e., affect dysregulation, dissociation). Towards that end, the Panel included systematic reviews that included or focused on C-PTSD.

Available Treatment Guidelines for the Problem

Since the publication of APA's (2017) PTSD guideline, there have been several guideline development efforts addressing the current state of the science in treating adults with PTSD, including the United Kingdom's National Institute for Health and Care Excellence (NICE, 2018); the U.S. Department of Veterans Affairs/Department of Defense (VA/DoD, 2023) updated guideline; the International Society for Traumatic Stress Studies (Bisson et al., 2019; Forbes et al., 2020), the Finnish Medical Association Duodecim (2020); and Phoenix Australia – Centre for Posttraumatic Mental Health (2020; Phelps et al., 2022). How the current guideline complements these prior efforts is discussed on page 46.

The APA Clinical Practice Guideline for the Treatment of the Problem

National Academy of Medicine Standards as the Basis for this CPG

In accordance with best practices for guideline development, APA follows the standards set forth by the former Institute of Medicine (IOM; now National Academy of Medicine) report (2011a) to develop high-quality and trustworthy clinical practice guidelines. These standards include ensuring that (1) the development process is transparent, (2) that any potential conflicts of interest are reviewed and managed, (3) that the guideline Panel is multidisciplinary with balanced expertise and includes patient/patient representative member(s), and (4) that it is informed by a quality systematic review of the literature. Further, (5) each recommendation is to be based on a clearly explained rationale that includes the balance of potential benefits vs. harms, strength of the underlying evidence, and a rating of the recommendation strength, and that is articulated clearly with the wording indicating its strength. Finally, (6) each guideline should be externally reviewed by a range of stakeholders in the treatment of PTSD (i.e., patients, clinicians, mental health care system and insurance providers, policymakers, etc.). A plan for future guideline updates should be noted (IOM, 2011a).

Evidence-Based Practice in Psychology

This guideline is predicated on the three dimensions mentioned in the APA Presidential Task Force on Evidence-Based Practice (2006) and APA's (2021) *Professional Practice Guidelines on Evidence-Based Psychological Practice in Health Care:* (1) grounding in the best available science; (2) practitioner expertise in application decisions; and (3) patient preferences, culture, and values. These three areas were consistent with earlier work by the National Academy of Medicine (former Institute of Medicine) and are universally accepted in medicine. In addition, the Advisory Steering Committee and Guideline Update Panel made every effort to fully apply the standards set forth by the IOM of the National Academy of Sciences, Engineering, and Medicine for developing independent, reliable, and high-quality clinical practice guidelines (IOM, 2011a & b). The clinical practice guideline is also intended to complement the two professional practice guidelines that were approved by APA's Council of Representatives: one that addresses adults with complex trauma histories (2024a) and another one that addresses adults with PTSD and traumatic stress (2024b). Both trauma-focused PPGs provide broad recommendations about providing care to individuals with trauma histories, including resilience and quality of life, addressing inequities based on race, ethnicity, gender, and other factors, and sequencing treatment.

Treatment Outcomes Considered in the Guideline

The Panel reviewed the list of outcomes from the previous systematic review that served as the underlying evidence for APA's (2017) PTSD guideline (Jonas et al., 2013) and used the Delphi method to identify outcomes as either critical (i.e., of highest priority, of greatest consequence) or important for decision-making between the provider and patient. The Panel made these evaluations of outcomes from the perspective of both providers and consumers who would be deciding whether to use a particular treatment for PTSD.

Critical Outcomes

Three outcomes were deemed critical to the Panel when reviewing the evidence.

- Serious adverse events or harms [e.g., active suicidal intent, serious self-harm, or suicide]
- PTSD symptom reduction
- Loss of PTSD diagnosis [including threshold].

Important Outcomes

For the remaining important outcomes, the Panel created four categories and listed the following outcomes within these categories:

- Comorbidity
  - » Depression
  - » Substance use
  - » Affect dysregulation
  - » Suicidal ideation
  - » Dissociation
- Clinically meaningful change
  - » Response

    - » Remission
    - » Good end-state functioning (getting into the normative range on two of three of the main outcomes [e.g., depression, functioning, anxiety, PTSD, etc.])
    - » Maintenance of treatment gains (3, 6, 12-month follow-up)
- Treatment acceptability
    - » Dropout (which can be due to any reason, including feeling better, moving, etc., not only negative reasons)
    - » Other adverse events or harms [e.g., disturbed sleep, agitation, weight gain, sedation, side effects to medication, etc.]
    - » Adverse events leading to withdrawals
- Quality of life and functioning
    - » Quality of life improvement [e.g., subjective sense based on positive mood, vitality, and interest in things]
    - » Functional outcomes [e.g., work, social/interpersonal, home, return to work or active duty]

PTSD is often concurrent with several other disorders (Koenen et al., 2017), most commonly mood disorders, especially unipolar depression, anxiety disorders, and substance use disorders (Kessler et al., 1995). It is also associated with an increased risk of suicide. Hence, the Panel included depression, substance misuse, and suicidal ideation as important outcomes to consider in evaluating the evidence. Because several symptoms of PTSD are indicative of anxiety, anxiety was not chosen as a separate outcome; this allowed the Panel to keep the number of outcomes it would consider manageable. Because DSM-5 PTSD added the diagnostic specifier "with dissociative symptoms," the Panel chose to use "dissociation" as an important outcome in the PICOTS along with affective dysregulation, both of which are commonly concurrent with PTSD and are part of a symptom cluster when diagnosing ICD-11 complex PTSD or C-PTSD (Brewin et al., 2017).

Key Questions and Analytic Framework of the Systematic Reviews

The Panel reviewed the previous iteration of APA's (2017) PTSD guideline's key questions, which were drawn from the Agency for Healthcare Research and Quality's (AHRQ) review of psychological and pharmacological treatments for adults with PTSD (Jonas et al., 2013, p. 7). The Panel then reviewed key questions and the analytic framework from an updated AHRQ systematic review that was released shortly after the APA PTSD guideline was approved as APA policy and used the combination of these questions to guide its scoping (Hoffman et al., 2018, p. 6):

1. What is the comparative effectiveness of different psychological treatments for adults with PTSD?
    a. How does comparative effectiveness vary by patient characteristics or type of trauma experienced?
2. What is the comparative effectiveness of different pharmacological treatments for adults diagnosed with PTSD?
    a. How does comparative effectiveness vary by patient characteristics or type of trauma experienced?
3. What is the comparative effectiveness of different psychological treatments and pharmacological treatments for adults diagnosed with PTSD?
    a. How does comparative effectiveness vary by patient characteristics or type of trauma experienced?
4. How do combinations of psychological treatments and pharmacological treatments (e.g., CBT plus paroxetine) compare with either one alone (i.e., one psychological or one pharmacological treatment)?[17]
5. Are any of the treatment approaches for PTSD more effective than other approaches for victims of particular types of trauma?
6. What adverse events (AEs) are associated with treatments for adults diagnosed with PTSD?

Even with AHRQ's updated systematic review's expansion of psychological (e.g., adding in energy psychology) and pharmacological interventions (e.g., adding in ziprasidone, aripiprazole, quetiapine, naltrexone, cycloserine, and inositol) there were notable gaps within the review (Hoffman et al., 2018). The review did not address complex PTSD, pharmacological augmentation interventions, family-based therapies, MDMA augmentation, ketamine, maintenance of treatment gains over time (i.e., 3, 6, 12-month follow-up), or complementary and integrative health interventions. Given the date of AHRQ's systematic review update (Hoffman et al., 2018), the Panel considered referring to the AHRQ's PTSD repository review for updated data (O'Neil et al., 2023) and treating the review plus the systematic review update as a "packaged review." However, the PTSD repository review only reported raw data, and it did not provide the meta-analytic effect size information necessary for drafting recommendations.

17 Key questions 4 and 5 are drawn from the systematic review that was used in APA's (2017) PTSD guideline (Jonas et al., 2013, p. 7).

Process and Methods for the CPG

Scoping

During its first videoconference call and several subsequent calls, the Panel began a discussion of the scope of the guideline and continued to discuss the scope over several subsequent calls. The Panel followed a "PICOTS" (Population, Intervention, Comparator, Outcomes, Timing, and Setting; Samson & Schoelles, 2012) approach to scoping. Using this approach, each PICOTS element served to frame decision-making about scope. The Panel first reviewed the PICOTS framework from APA's previous guideline (2017), which was drawn from Jonas and colleagues' (2013) systematic review that had served as the primary empirical basis for that guideline; the Panel determined whether revisions were warranted. The Panel carefully reviewed the commentaries on the previous version of the guideline (Courtois & Brown, 2019). The Panel considered whether to modify the inclusion of children, noting that some studies include children, adolescents, and adults with PTSD in their samples. However, it was noted that there are significant differences between child PTSD and adult PTSD (with separate interventions, outcomes, timing, and settings to consider). The Panel decided to focus on adults aged 18 and older with PTSD and exclude children and adolescents under the age of 18 with PTSD.

The Panel then considered whether to include complex PTSD (C-PTSD) as well as PTSD. As previously discussed, complex PTSD is not included in the DSM-5 (American Psychiatric Association, 2022). However, C-PTSD is included in the ICD-11 (World Health Organization, 2019). The Panel believed that by including complex PTSD in the Population element, the updated guideline would better address the interests of an international audience regarding effective treatments for this presentation of the disorder. The Panel overall agreed to include C-PTSD and its associated symptoms, including affect dysregulation and social functioning, within the population category.

The Panel then reviewed the "Interventions" element of the original guideline's PICOTS framework. It decided not to remove any interventions that were already listed in the "included" column of the original PICOTS framework and chose to include those interventions the original PICOTS framework excluded (which were "complementary and alternative medicine approaches,"[18] and "psychological or pharmacological interventions not listed as included"). For pharmacological interventions, the Panel agreed to address them as drug classes instead of listing individual medications. The Panel also considered including interventions that treat comorbid sleep, nightmares, guilt, and moral injury in patients with PTSD. Due to concerns about expanding the scope of the guideline too broadly, the Panel decided to only include interventions that target PTSD symptoms but not exclude interventions if they also target other outcomes. In addition, the Panel addressed the modality of the intervention and whether to include, for example, self-help or self-management web-based interventions. Upon reflecting on the wide range of web-based interventions, the Panel agreed to only include individual and group interventions (in-person or web-based) that are facilitated by a licensed therapist. It also agreed to include culturally adapted interventions that are led by a licensed therapist or socially sanctioned healer,[19] as well as polyvagal, sensorimotor, and family therapies.

In the early stages of scoping, the Panel used the Delphi method to complete an outcome prioritization survey. In this survey, panel members rated outcomes from 1 "not important" to 9 "critical" for deciding what treatment to recommend. The Panel narrowed its list of outcomes to nine outcomes. Based on the results of this survey, Panel members found serious adverse events or harms [e.g., active suicidal intent, serious self-harm suicide], PTSD symptom reduction, and loss of PTSD diagnosis [including threshold] as its three most critical outcomes. Scoping decisions about which populations, interventions, comparators, outcomes, timing, and settings to include, as well as the key questions, are noted in the Scoping section of the Executive Summary.

Vetting and Appointment of Members to the GUP

The Advisory Steering Committee (ASC) released a call for nominations (including self-nomination) to include researchers and clinicians across various professional disciplines (psychology, psychiatry, social work, nursing) who had content expertise in the topic area of PTSD in adults as well as in biostatistics or methodology. The ASC sought those with knowledge of treatment issues related to various dimensions of diversity (such as race/ethnicity, socioeconomic status, culture, gender/sex, sexuality, physical and mental abilities) and treatment settings to seat a panel with diverse perspectives on PTSD and its treatment that could discuss the research data and its applicability to those seeking treatment.

18 Now known as "complementary and integrative health" (National Center for Complementary and Integrative Health, 2021)

19 A socially sanctioned healer is an individual who provides healing towards a person in suffering. The healers range from licensed providers to traditional healers in various cultures (Frank & Frank, 1991)

Additionally, the ASC sought a community member who self-identified as having had PTSD (currently or in the past) or was a close family member of someone with PTSD and who had relevant leadership experiences, such as leadership of groups that looked to enhance public awareness and access to services.

In constituting the Panel, there was an effort to incorporate members who represented a broad range of experiences and expertise in the treatment of PTSD, including variation in terms of psychotherapy models, populations (e.g., adult, underserved populations), settings (academic, community, primary care), roles (clinician providers, researchers, health care administrator, health care consumer), and disciplines (psychology, psychiatry, social work, nursing). While it would not be possible for a panel of this size to represent all constituencies and interests in a truly equitable fashion, the mandate of the Panel was to include as broad a perspective as possible when reviewing the literature. Once the ASC reviewed the nominations, it sent its recommended nominees for review to the Board of Professional Affairs (BPA) and Board of Scientific Affairs (BSA). Once reviewed and vetted by BPA and BSA, the final nominations were then sent to the Board of Directors for final review and provisional appointment.

Conflicts of Interest

Before confirming the appointment to the Guideline Update Panel, nominees provided information about possible conflicts of interest, a significant issue in the IOM standards, and current best practices in guideline development. Conflicts of Interest (COI) are defined as, "a divergence between an individual's private interests and his or her professional obligations such that an independent observer might reasonably question whether the individual's professional actions or decisions are motivated by personal gain, such as financial, academic advancement, clinical revenue streams, or community standing" (Institute of Medicine, 2011a, p. 78; the definition is drawn from Schünemann et al., 2009, p. 565).

The IOM report additionally discusses intellectual conflicts of interest relevant to clinical practice guidelines, defined as "academic activities that create the potential for an attachment to a specific point of view that could unduly affect an individual's judgment about a specific recommendation" (IOM, 2011a, p. 78; the definition is drawn from Guyatt et al., 2010, p. 739).

Candidates to the Panel each completed an APA Conflicts of Interest disclosure form. Emphasis was placed on disclosing all potential conflicts for the APA staff and ASC members to review and decide upon. While intellectual affiliations were expected, no panel members were to be singularly identified with particular interventions, nor were they to have significant known financial conflicts that would compromise their ability (or appearance thereof) to weigh evidence fairly. The ASC understood, however, that some "adversarial collaboration" (Mellers et al., 2001) or standing for different points of view was expected and encouraged as part of the process.

Once the panel was formed, members verbalized any actual or potential conflicts in their meetings so all members of the Guideline Update Panel would be familiar with the diversity of perspectives and range of possible influences and biases. COI forms were updated annually, and panel members and staff were asked to give more frequent updates if there were any changes in their disclosures that could be relevant to the development of an unbiased guideline.

Multiple strategies were used to identify and manage COI. Panel members (and ASC members and associated staff) all completed a disclosure form on an annual basis that was reviewed by APA staff. Panel members were expected to disclose potential COI at all meetings and on phone calls whenever new COI emerged. This was structured in the agendas for the meetings. Several strategies were used to manage COI, and typically, these involved some combination of recusing from the discussion of a particular topic, recusing from voting on certain issues, or a combination of the two. The APA conflicts of interest policy and disclosure form are in Appendix C.

Comprehensive Search of the Professional Literature

A systematic review involves a methodical and organized search for studies and evidence of the efficacy and effectiveness of the treatment under consideration (IOM, 2011b). A meta-analysis is the use of quantitative statistical methods in a systematic review to integrate the results of included studies. Briefly, a systematic review or meta-analysis involves searching a variety of scientific databases using selective search terms to find relevant studies. The identified individual studies are then assessed to decide whether they meet inclusion criteria and assessed using predefined criteria to assess the risk of bias. Results are then compiled and analyzed.

The IOM (2011a) standards require the use of one or more systematic reviews for guideline development. The Panel was advised to select the fewest number of systematic reviews needed to address the Panel's identified scope in order to keep the guideline update process manageable. Ideally, the panel will use reviews that are at most three years old (2019-present) so that the reviews are not more than five years old at the time of guideline approval and publication (estimated around 2025), given that a systematic review is considered outdated after five years. For the current guideline, the Panel used a systematic review that provided an update to the previous guideline's systematic review (Jonas et al., 2013) on the comparisons of psychological and pharmacological interventions in adults with PTSD (Hoffman et al., 2018). However, due to the age of the systematic review the Panel supplemented two additional systematic reviews, each

either independently conducted via IOM standards (2011b) or evaluated using AMSTAR-2 quality standards (Shea et al., 2017): one that provided updated information on psychological interventions for PTSD and trauma (Jericho et al., 2022) and another one that provided updated information on pharmacological treatments for PTSD (published by Cochrane; Williams et al., 2022). See Table 1 on p. 28 for a summary as well as the location of the list of keywords used in article searches and refer to Appendix F for results of the AMSTAR-2 evaluation of these reviews.

Given the interest in and use of psychodynamic therapies, the CPG update panel carefully examined existing systematic reviews within the timeframe. Upon initial review, the Panel found that there were very few trials of psychodynamic psychotherapy that were aggregated as a group within the larger systematic review literature. The Panel went beyond the traditional CPG methods by engaging in several rounds of updated literature searches with the explicit purpose of capturing any systematic reviews including psychodynamic psychotherapies that met inclusion PICOTS. Despite these efforts, the Panel found that there was still insufficient literature that met the criteria to be able to make a recommendation regarding psychodynamic approaches.

Updated Search of the Professional Literature

In early 2024, it was decided to sequence the presentation of this guideline to APA's Council of Representatives such that the related professional practice guidelines (American Psychological Association, 2024a & b) could be approved first and then referenced by this CPG. Since it had additional time until submission, the Panel opted to update their search.

Given the complexity of PTSD symptomatology as well as an increase in complementary and integrative medicine interventions, augmentation interventions such as d-cycloserine or MDMA and psychotherapy, and in order to be thorough and check for new literature on interventions for which there was insufficient evidence (e.g., psychodynamic), the Panel decided to conduct an updated search of the literature. This updated search was conducted in two waves, the first using the National Center for PTSD's (2023) PTSD Repository database of psychological interventions with control conditions and the second utilizing a broader search by APA's library staff.

In the first wave, to check for additional literature on psychodynamic psychotherapy, the Panel, with APA staff assistance, referred to the National Center for PTSD's (2023) PTSD Repository database of psychological interventions with control conditions that were part of the Metapsy Collaboration's project (2024). They searched for RCTs of psychodynamic psychotherapy conducted between 2018 and the present. As of January 2024, no new RCTs appeared in the database collection that met enrollment criteria for inclusion including risk of bias etc. A meta-analysis on interpersonal and psychodynamic psychotherapies conducted by Keefe and colleagues (2024) was suggested during the public comment period and subsequent governance review. The publication of the meta-analysis was past the Panel's updated search window time period. Further, this review would not have met inclusion criteria because it received a grade of Critically Low on the AMSTAR-2 quality review and not all the included studies would have met the Panel's PICOTS criteria, including risk of bias, etc. The Panel acknowledges the long history of the use of psychodynamic psychotherapy for the treatment of PTSD in adults (Barber & Solomonov, 2016; Kudler et al., 2009; Lampe et al., 2014) and that the databases employed were limited to RCTs, which may have excluded psychodynamic treatment studies that employed different research methodologies. Notably, there are trials that have examined psychodynamic treatments (Gersons et al., 2020; Lindauer et al., 2005) and show some promising results. Additional research to replicate these findings is needed and encouraged by the Panel.

The Panel also searched the PTSD literature to determine if there were any updated randomized controlled trials (RCTs) of complementary and integrative health treatments (e.g., yoga, mindfulness), augmentation interventions, and MDMA-assisted psychotherapy interventions. The Panel referred again to the National Center for PTSD's (2023) PTSD Repository database of complementary and integrative health interventions with control conditions and searched for RCTs of complementary and integrative health interventions conducted between 2018 and the present. As of January 2024, no new complementary and integrative health RCTs appeared in the database collection that met enrollment criteria for inclusion, including for risk of bias, etc. The Panel acknowledges the deemphasis placed on Eastern medicine and Indigenous practices as well as the exclusion of certain populations in research studies and that there are potentially promising studies for these interventions, specifically MDMA-assisted psychotherapy (Sarmanlu et al., 2024), trauma-sensitive yoga (Zaccari et al., 2023), and other interventions that had insufficient evidence for the Panel to make a recommendation. It is important to note the potential components and mechanisms of change that may occur throughout these interventions. For example, hypnotherapy and meditation are known to share some of the commonalities: relaxation and staying in the present moment (Lynn et al., 2012). It is also important to distinguish between manualized mindfulness treatments that have been studied for efficacy in treating particular conditions (Alsubaie et al., 2017) and conventional mindfulness (i.e., during a yoga class or group meditation). Interpretation has also been studied as a potential mechanism of change within these interventions (Bufka et al., 2020). The Panel also wants to acknowledge that it only included interventions that were conducted by a licensed health care provider or socially sanctioned healer, and reviewing other interventions such as peer support groups and self-help were outside the scope of the guideline. The Metapsy's meta-analytic tool of psychotherapy trials (https://www.metapsy.org), using a data repository developed by Dr. Jessica

Hamblen of the National Center for PTSD (https://ptsd-va.data.socrata.com), was used to examine whether there were any new, low/some risk of bias RCTs of therapies that would shift potential recommendations, with consultation of Dr. Pim Cuijpers and Dr. Jessica Hamblen (please see Appendix K for additional information).

Given the additional time until document submission after this first wave of updated searches, the Panel decided to conduct a second wave of updated searches. It asked APA's library staff to conduct an updated search of the literature for systematic reviews and meta-analyses using the same search string and databases (i.e., PubMed, PsycNET, and Google Scholar) for reviews published between January 1, 2023, and April 1, 2024 (please refer to Appendix I for APA's search methodology of systematic reviews and meta-analyses). The Panel then narrowed down the list of reviews and agreed to add six more reviews to determine whether the updated literature search would impact the recommendation statements. The Panel wishes to note that at the time of the literature search period, there was insufficient evidence to recommend for or against the specific interventions that were categorized as "other treatments reviewed." See Table 2 on p. 29 for a summary as well as the location of the list of keywords used in article searches and refer to Appendix F for results of the AMSTAR-2 quality evaluation of these six additional reviews.

By the time of finalization of the current guideline document, two of the 15 total underlying reviews will have crossed the 5-year mark for being considered a current review according to best practices. However, it should be noted that the Panel completed its decision-making about the recommendations during the 5-year window in which each review was considered current.

TABLE 1

Summary of Systematic Reviews and Meta-Analyses Used to Supplement Hoffman et al. (2018) and Location of Keywords/Search Terms Used to Identify Individual Studies

Area of Interest	Systematic Reviews and Meta-Analyses Used	Location of Keywords/Search Terms
Updated review of psychological interventions	"Trauma-focused psychotherapies for posttraumatic stress disorder (PTSD): a systematic review and network meta-analysis" (Jericho et al., 2022)	*Supplementary material 1: Search term strategies* (Jericho et al., 2022, p. 2 of suppl. 1)
Updated review of pharmacological interventions	"Pharmacotherapy for posttraumatic stress disorder (PTSD)" (Cochrane; Williams et al., 2022)	*Appendix 1. Cochrane Common Mental Disorders Controlled Trials Register (CCMDCTR)* (Williams et al., 2022, pp. 268–270) *Appendix 2. Other database search strategies – 1* (pp. 270–275) *Appendix 3. Other database search strategies – 2* (p. 275)
Complex PTSD, affect dysregulation and dissociation.	"The efficacy of psychological interventions for complex trauma: a systematic review and meta-analysis" (Choi et al., 2020)	*Methods – Study selection* (Choi et al., 2020, pp. 165–166)
	"Psychological interventions for ICD-11 complex PTSD symptoms: systematic review and meta-analysis" (Karatzias et al., 2019)	*Method – Search strategy and study selection* (Karatzias et al., 2019, p. 2)
Pharmacological augmentation interventions	"Pharmacological therapy for post-traumatic stress disorder: a systematic review and meta-analysis of monotherapy, augmentation, and head-to-head approaches" (Hoskins et al., 2021)	*2.4 Search strategy* (Hoskins et al., 2021, p. 3)
Comorbid PTSD and substance use disorder	"A systematic review and meta-analysis of psychological interventions for comorbid post-traumatic stress disorder and substance use disorder" (Roberts et al., 2022)	*2.4 Searches* (Roberts et al., 2022, p. 5) and *Supplementary Appendix 1* (pp. 5–7)
Family-based therapies	"A systematic review and meta-analysis of individual and couple therapies for posttraumatic stress disorder: clinical and intimate relationship outcomes" (Sijercic et al., 2022)	*1.1. Literature search* (Sijercic et al., 2022, p. 2) and *Appendix A1* in supplement (Sijercic et al., 2022)
MDMA augmentation	"A comparison of MDMA-assisted psychotherapy to non-assisted psychotherapy in treatment-resistant PTSD: a systematic review and meta-analysis" (Illingworth et al., 2021)*	*Appendix 1. Search terms* (Illingworth et al., 2021)

Note. *After further review, the Panel decided to replace the systematic review that initially appeared in the March – April 2023 30-day public comment period (Tedesco et al., 2021) with Illingworth et al. (2021) due to the review being outside of scope.

TABLE 2

Summary of the Six Additional Systematic Reviews/Meta-Analyses and Location of Keywords/Search Terms Used to Identify Individual Studies

Area of Interest	Systematic Reviews and Meta-Analyses Used	Location of Keywords/Search Terms
Psychedelic interventions (Ketamine)	"Effectiveness of Ketamine for the Treatment of Post-Traumatic Stress Disorder – A Systematic Review and Meta-Analysis" (Almeida et al., 2024)	*Search Strategy* (Almeida et al., 2024, p. 23) and *Section 1.0 – Search Strategy* (Almeida et al., 2024, suppl. p. 110)
	"So How Special is Special K? A Systematic Review and Meta-Analysis of Ketamine for PTSD RCTs" (Borgogna et al., 2024)	*1.1. Search Strategy* (Borgogna et al., 2024, p. 3)
Written Exposure Therapy	"A Systematic Review of Written Exposure Therapy for the Treatment of Posttraumatic Stress Symptoms" (DeJesus et al., 2024)	*Method – Search Strategy* (DeJesus et al., 2024, p. 2)
Applicability of Cognitive Behavioral Therapy in routine clinical settings	"Cognitive Behavior Therapy for Adult Post-Traumatic Stress Disorder in Routine Clinical Care: A Systematic Review and Meta-Analysis" (Öst et al., 2023)	*2.1 Literature Search* (Öst et al., 2023, p. 3) and *Supplement 3* (Öst et al., 2023, suppl., p. 10)
Complementary and integrative health interventions	"Body-and Movement-Oriented Interventions for Posttraumatic Stress Disorder: An Updated Systematic Review and Meta-Analysis" (van de Kamp et al., 2023)	*Method – Eligibility Criteria, Information Sources, and Search Strategy* (van de Kamp et al., 2023, p. 837) and *Appendix 1* in supplement (van de Kamp et al., 2023)
Updated review of pharmacological interventions	"Clinical Outcomes of Recommended Active Pharmacotherapy Agents from NICE Guideline for Post-Traumatic Stress Disorder: Network Meta-Analysis" (Zhang et al., 2023)	*Methods – 2.1 Literature Search* (Zhang et al., 2023, p. 2)

Decisions Regarding Assessment of Inclusion/ Exclusion Criteria

Decisions on the assessment and inclusion/exclusion of the individual studies varied based on the particular systematic review/meta-analysis based on the PICOTS. Please refer to the systematic reviews/meta-analyses for specific details. However, while two reviews included a few nonrandomized trials (DeJesus et al., 2024; Sijercic et al., 2022), overall, the reviews only included randomized controlled trial (RCTs) studies as those met quality criteria for questions regarding efficacy. The Panel observed that the Hoffman et al. (2018) review did not include complex PTSD or trauma and, in terms of the "interventions," the review excluded "complementary and alternative medicine approaches" (e.g., yoga) as well as "psychological or pharmacological interventions not listed as included" (e.g., family-based therapies). There was also significant clinical interest in complementary and integrative health interventions, psychedelic interventions (e.g., ketamine, MDMA), and the augmentation of pharmacological and psychological interventions. Given the date of the review authored by AHRQ (Hoffman et al., 2018) as well as being inclusive of other interventions, the Panel agreed to include 15 systematic reviews and meta-analyses that addressed the following areas (see Tables 1 and 2 above for a summary of these areas).

Assessing Strength of Evidence

Strength of evidence (SOE) was rated as either "insufficient/ very low," "low," "moderate," or "high" based on the combined results of analyses of risk of bias, inconsistency, indirectness, and imprecision. While APA staff prepared the Grid for the Panel based on information extracted from the reviews and studies, the Panel made all the decisions regarding the evidence and recommendations. Specifically, APA staff inserted information from the reviews and studies on quality ratings, outcomes examined and associated effect sizes, harms and burdens of interventions (as described in more detail below), study results on patient values and preferences, and study participant descriptions the Panel might want to reference for discussions on applicability. As the Panel discussed the Grid, APA staff transcribed the Panel's decisions into each cell of the Grid.

Types of Comparisons (controls) Used by Studies

The type of comparison (control) groups used by studies varied across the systematic reviews/meta-analyses. Please refer directly to the reviews for specific details. Broadly, however, control groups used by studies included both active and nonactive controls. Examples of often-used active controls were treatment as usual/usual care (whose exact definition varies by study), nonspecific interventions (e.g., sham), and another active intervention (i.e., another psychotherapy or medication). Examples of nonactive controls included such things as waitlist and no treatment.

Development and Use of Grid

The Grid is a document used by panel members to summarize and evaluate the evidence generated in the systematic review or meta-analyses, along with any supplemental information. Panel ratings and judgments were documented on the grid to aid in the formulation of recommendations (Treweek et al., 2013). These tables allow Panel members to document decisions, compare consistency across decisions, and give transparency to reviewers and users of the guideline document. The four main domains of decision-making are as follows: (1) strength of evidence; (2) the balance of benefits vs. harms and burdens of interventions; (3) patient values and preferences; and (4) applicability of the evidence across PICOTS.

Completion of Grid

The four domains below formed the basis on which each treatment recommendation and its strength were decided. For each recommendation, a text description and a justification for the recommendation were included on the Grid (see Appendix J linked separately).

Rating of Aggregate/Global Strength of Evidence

For each of the cells within the Grid, *aggregate/global strength of evidence* was based on the strength of evidence from the review for the three critical outcomes, namely, serious adverse events or harms [e.g., active suicidal intent, serious self-harm suicide], PTSD symptom reduction, and loss of PTSD diagnosis [including threshold]. The Panel followed the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) consortium guidance that the aggregate strength of evidence could be no higher than the lowest individual strength of evidence for each of the critical outcomes (Guyatt et al., 2013). For example, if one critical outcome had 'high' strength of evidence but the other critical outcome had 'low' strength of evidence, the global quality of evidence for that particular decision table or column in the grid would be 'low,' since that is the lowest strength of evidence for an individual critical outcome.

Assessing Magnitude of Benefits

One of the key components of the decision-making process for the Panel was assessment of the balance between benefits and harms. This required the quantification of both benefits and harms.

Quantification of benefits was based on data from the quantitative meta-analyses for each of the critical and important outcomes that the Panel had selected at the start of the guideline update process for those interventions that had at

least low quality of evidence for the critical outcome, response to treatment. For each of the outcomes on the Grid, the Panel rated the magnitude of benefits as "large," "moderate," or "small" benefit of Treatment 1 relative to Treatment 2 and the reverse or "No difference in effect" or "Unable to rate." The rating system was used for assessing harms/burdens. When rating benefits, general "rules of thumb" were adopted by the Panel, reflecting the more advanced nature of the field with more and higher quality clinical trials. When considering the number of total participants across trials (>100), number of randomized controlled trials (>2), replication beyond developer of intervention, strength of evidence/quality of evidence ratings (e.g., Hoffman et al., 2018; Williams et al., 2022), measurement of masked-interviewer PTSD severity and diagnosis, evidence of maintenance of therapeutic gains beyond immediate posttreatment, and benefit evidenced across both critical and important outcomes were considered. When reviewing information provided by network meta-analyses, only direct comparisons were considered.

Assessing Magnitude of Harm/Burdens

Harms were differentiated from burdens that were identified as disruptions associated with treatment (i.e., time spent, homework/need to practice, cost, convenience) rather than as injury. As discussed earlier, the review of the treatment literature did not generate sufficient data on harms and burdens of interventions because, unfortunately, this information is not routinely reported in studies of psychosocial interventions. The APA Task Force to Revise the Journal Article Reporting Standards (JARS) for quantitative research considered this deficit. It decided to recommend in the new standards that randomized controlled trial (RCT) researchers report data regarding harms and burdens, including indicating "none" if there were none (Appelbaum et al., 2018).

Further, when adverse events, harms, or burdens are discussed, they are often not defined or distinguished from one another. To supplement the shortage of harms/burdens information in studies included in the chosen systematic reviews, the Panel incorporated information on treatment harms/burdens from other published literature (e.g., observational studies). The standards for these additional studies were less stringent than for the systematic reviews. This choice enabled the Panel to cast the widest net capturing potential negative impacts of treatment not otherwise found. The Panel paid especially close attention to the harms and burdens literature by identifying literature that would not meet the IOM standards to serve as the underlying evidence for developing recommendation statements, but it would serve to inform their decision-making when developing the recommendation statements.

The Panel also discussed the issue of attrition as a possible harm. Because attrition in a randomized trial can signify different things (e.g., stopping because treatment is not acceptable or tolerable versus discontinuing due to early symptom relief; treatment not consistent with patient's values and preferences; and availability of services not part of a research trial), the Panel carefully considered, where possible, the reason for potential dropout.

Finally, to supplement the limited information on harms and burdens gleaned from published research, clinicians on the Panel reported their experiences in delivering, supervising, or training, in particular interventions and the concerns noted by colleagues. Likewise, consumer members reported on their own and peer's experiences with various interventions. In general, many of the identified harms and burdens pertaining to psychosocial interventions were more general and common to most psychosocial treatments, for example, the potential for short-term exacerbation of symptoms (harm) or the time necessary for multiple psychotherapy sessions (burden). Further, clinicians and consumer members reported various side effects as potential harms of medication treatment. Though it was important to obtain all available sources of information on patient values and preferences, due to the inclusion of both anecdotal (i.e., clinician and patient report) and peer-reviewed article information, the strength of evidence on these topics was rated as insufficient/very low.

Once possible harms and burdens were identified, Panel members then compared these with the benefits of the interventions. On the Grid, the Panel rated whether the balance of benefits to harms/burdens strongly or slightly favors Treatment 1 over Treatment 2 or the reverse, the balance of benefits to harms/burdens was the same, or it was unable to determine the balance of benefits to harms/burdens between Treatment 1 and Treatment 2.

Assessing Patient Values and Preferences

In addition to assessing the benefits and the harms/burdens associated with specific interventions, the Panel attempted to ascertain patient values and preferences. As described in the assessment of harms and burdens section above, the Panel relied on a search of the literature as well as clinicians and consumers/community members on the Panel who voiced their perspectives about preferences for different interventions as well as the value that patients might place on different outcomes or harms/burdens associated with particular treatments. The strength of evidence (SOE) for all this information was very low because it included observational studies and "expert" (i.e., panel member) opinion.

Applicability of Evidence

The final determinant that Panel members considered before making recommendations was the *applicability (generalizability)* of the evidence to various populations and settings. To organize information on applicability, Panel members applied the PICOTS framework (referring to Populations, Interventions, Comparators, Outcomes, Time, and Settings) to review specific information from the studies to determine if there were any concerns pertinent to applicability about the population, interventions, comparators, outcomes, timing, or settings to be noted in each cell on the grid.

Each Panel member had ample opportunities to raise questions or concerns about the process of completing the Grid. The Panel was divided into subgroups, and these subgroups reviewed the Grid to identify any questions or concerns that users of the guideline (including patients, clinicians, scientists, and administrators) might raise. After completing the Grid, the Panel globally reviewed it to assess and ensure consistency in decision-making across recommendations. For purposes of consistency across all clinical practice guidelines, the Advisory Steering Committee established voting procedures that may be found in Appendix D.

Diversity of Samples Included in Reviews

Altogether, of the 337 unique studies that were identified across the fifteen systematic reviews/meta-analyses, 66% of them were conducted in the United States (including Puerto Rico), with non–U.S.-based samples including Australia, Brazil, Belgium, Bosnia, Canada, Colombia, Chile, China, Croatia, Denmark, Finland, France, Germany, India, Iraq, Iran, Ireland (Northern), Israel, Italy, Japan, Korea, Kurdistan, The Netherlands, Norway, Poland, Portugal, Romania, Somalia, South Africa, Sweden, Switzerland, Syria, Thailand, Turkey, United Kingdom, and Yugoslavia. Of the 319 studies that reported the average age, 78% of the studies reported the average age ranging from 36 to 64 years. Of the 319 studies that reported information on gender, 150 studies reported having a range of 20%–80% of the participants identifying as female. Of the 92 studies that reported on ethnicity, 80% of them reported having less than 20% of participants identify as Hispanic/Latino/a/e/x. Finally, of the 208 studies that reported on race, 118 of them reported having between 20% and 80% of participants identified as non-White (please see Appendix H for more information). Below is a broad overview of the diversity of samples included within the studies in each of the identified systematic reviews/meta-analyses.

In the first systematic review by Hoffman and colleagues (2018), the reviewers abstracted the following data for each intervention category: mean age of patients, percent of patients who identified as female, and percent of patients who identified as non-White. While the data were reported individually within each intervention category, across the board, the percentage of female patients ranged from 0% to 100%, and the rate of patients who identified as non-White ranged from not reported to 100%. The mean age of the study participants within the 193 studies that were included in the primary systematic review also ranged between 27 and 63 years (Hoffman et al., 2018). In a network meta-analysis that served as a supplement to the primary systematic review to provide updated information for psychological interventions, the mean age of the 3,543 study participants ranged from 30 to 66 years, and the percent of participants that identified as female ranged from 0% to 100% (Jericho et al., 2022).[20] For more information on the participant characteristics within each of the included studies, please refer to Table 1: Characteristics of Included Studies in Jericho and colleague's (2022) network meta-analysis. Another review that supplemented the primary review that compared individual therapy and couples' therapy for the treatment of PTSD (Sijercic et al., 2022) reported that within the couples' therapy studies, about 0% to 57.1% of the identified patients identified as female and the average age of the identified patients ranged between 32.55 to 56 years (Sijercic et al., 2022).

In the reviews that served as a supplement to the primary evidence base to address complex PTSD symptoms (Choi et al., 2020; Karatzias et al., 2019), Choi and colleagues (2020) noted that most study participants resided in high socioeconomic status countries and identified as female and White. Across the 51 studies included in the review conducted by Karatzias and colleagues (2019), the average age of study participants ranged from not reported to 58 years, and the percentage of study participants who identified as female ranged from not reported to 100%. Please refer to Appendix II. Study Characteristics and Risk of Bias Assessment of Selected Studies in Choi et al. (2020) and Table D1: Summary of Characteristics of the 51 Included Studies in Karatzias and colleagues' (2019) supplemental material for more information.

In the review that served as a supplement to the primary review that addressed psychological interventions for comorbid PTSD and substance use disorder (Roberts et al., 2022), most of the 26 studies identified were conducted in the United States, with 0% to 100% of participants identifying as female and the average age of participants ranging from 34 to 47 years. The review authors did not conduct a subgroup analysis of the percentage of participants who identified as non-White, which may impact the applicability of psychological interventions in individuals who identify as non-White and have comorbid PTSD and substance use disorder. Please refer to Table 1. Characteristics of the included studies in the review by Roberts and colleagues (2022) for more information on participants included in the studies.

In a review conducted by Cochrane (Williams et al., 2022) that served as a supplement to the primary review for updated information on pharmacological treatments for PTSD, the average age of study participants across the 66 studies included ranged between 18 and 82 years. The authors did not conduct a subgroup analysis of the percentage of participants who identified as female nor the percentage of participants who identified as non-White, which may impact the applicability of pharmacological interventions for this particular population. Another review conducted by Hoskins and colleagues (2021) that examined pharmacological monotherapy, augmentation, and head-to-head trials of pharmacotherapy identified 100 studies, and within those studies, the percentage of participants who identified as female ranged from 2% to 100%, and the age

20 The Panel only considered direct comparison studies that were published in 2019 or later and were not mentioned in the other systematic reviews/meta-analyses. Only one study from the Jericho et al. (2022) review was identified that met this criterion (Bryant et al., 2019).

of participants ranged between 36 and 53 years. The final review, which was used as a supplement to the primary review to examine MDMA-assisted psychotherapy for the treatment of PTSD, did not conduct any subgroup analyses of the participants' characteristics (Illingworth et al., 2021). However, across the four clinical trials identified in the review, the mean ages of participants ranged from 37.2 to 42 years, and about 16% to 85% of participants identified as female (Mithoefer et al., 2010; Mithoefer et al., 2018; Oehen et al., 2013; Ot'alora et al., 2018).

Diversity of Samples Included in the Reviews from the Updated Search

In the first two reviews that were supplemented to further examine the efficacy of ketamine across the 16 studies (k = 10 studies, Almeida et al., 2024; k = 6 studies, Borgogna et al., 2024), the average age of the 584 patients ranged from 36.05 to 43 years and approximately 16% to 43% identified as female. The range of patients who identified as White ranged from not reported to 95% and, of the data reported, between 11% and 20% of the sample identified as Hispanic/Latino/a/e/x. The studies were primarily conducted in the United States.

The review that examined the current state of the science for Written Exposure Therapy (DeJesus et al., 2024) identified 17 studies, and of the 7 studies that were RCTs, 4 of them met the Panel's PICOTS criteria (Sloan et al., 2012; Sloan et al., 2018; Sloan et al., 2022; Sloan et al., 2023). The average age of the 519 patients across the four RCTs was 41 years, and 39.5% of the sample identified as female. In terms of race and ethnicity, 44.25% of the sample identified as non-White, and 13.5% of the sample identified as Hispanic/Latino/a/e/x. The four trials were conducted in the United States.

Of the 6,482 patients across the studies identified in the review that served as supplemental evidence regarding the applicability of cognitive-behavioral therapy in routine clinical settings (Öst et al., 2023), the mean age of patients ranged from 31 to 60 years, and the percent of patients that identified as female ranged from 0% to 100%. Between 0% and 53% of the sample identified as non-White and 0% to 16% identified as Hispanic/Latino/a/e/x. Studies were conducted in the United States, Northern Ireland, the United Kingdom, and The Netherlands.

The review that examined body- and movement-oriented interventions for the treatment of PTSD in adults (van de Kamp et al., 2023) consisted of a sample of 2,429 patients from France, Denmark, Israel, Colombia, Australia, Iceland, Canada, India, and the United States (including Puerto Rico). Of the 2,429 patients, the mean age ranged from 33 to 67 years, and the percentage of patients identified as female ranged from 0% to 100%. The percent of patients who identified as non-White ranged from 11% to 99%, while between 4% and 27% of patients identified as Hispanic/Latino/a/e/x.

The final review that served as an update on the efficacy of pharmacological interventions for the treatment of PTSD (Zhang et al., 2023) had a combined total of 5,170 patients, and of these patients, the mean age ranged from 37 to 54 years of age and between 0% and 100% of the sample identified as female. The percent of patients identified as non-White ranged from 0 to 100% and between 0% and 65% of the sample identified as Hispanic/Latino/a/e/x. The majority of the studies identified were conducted in the United States, and a small number of studies had international representation, including China, Iran, and South Africa.

Please refer to Appendix H for details on the demographics of included participants from each of the 15 reviews.

Comorbidity of Samples Included in Reviews

In the systematic review that served as the primary empirical basis (Hoffman et al., 2018), while the prevention and reduction of comorbid disorders was included as one of the outcomes, the authors reported significant gaps in the reporting of outcomes in adults with PTSD and comorbid conditions. In the reviews that served as a supplement for updated information on psychological and pharmacological interventions for adults with PTSD (Jericho et al., 2022; Williams et al., 2022), there were a wide range of comorbidities and types of traumas included within the individual studies, ranging from mixed trauma type to sexual assault. Williams and colleagues (2022) noted that the conclusions of their analyses may not be applicable to all comorbidities. The review on family-based therapies conducted by Sijercic et al. (2022) did not note whether they excluded comorbidities in their criteria for accepting individual studies.

In the reviews that examined treatments for complex PTSD (Choi et al., 2020; Karatzias et al., 2019), Choi and colleagues (2020) also included studies that had the following populations: organized violence, refugees, military trauma, asylum seekers, multiple interpersonal traumas, sexual trauma, and child abuse. The individual studies identified in Karatzias and colleagues' (2019) review also included military trauma, female assault, mixed traumas, refugees witnessing genocide/violence, medical traumas (i.e., HIV status), sexual traumas, female interpersonal violence, comorbid psychosis, and child abuse. Both reviews included patients with comorbid PTSD and substance use or another mental health condition.

In the review that examined pharmacological augmentation, monotherapy, and head-to-head pharmacologic approaches for the treatment of PTSD (Hoskins et al., 2021), the review authors did not place any restrictions on comorbidities and included patients who experienced PTSD in addition to the following comorbidities: sleep disturbance, depression, trauma-related nightmares, and alcohol dependence. The following types of substance use were identified across the studies in the review by Roberts and colleagues (2022) examining psychological interventions for comorbid PTSD and substance use disorder: alcohol misuse, polydrug, alcohol dependence, mixed alcohol and opioid use, and opioid misuse. The review on MDMA-assisted psychotherapy by Illingworth

and colleagues (2021) did not note whether the review excluded studies that had patients with comorbidities.

Comorbidity of Samples Included in the Reviews from the Updated Search

The first update review on ketamine for the treatment of PTSD conducted by Almeida and colleagues (2024) excluded studies that had patients with comorbid psychiatric disorders, substance use disorders, or other neurological, pulmonary, or cardiovascular conditions. The second review on ketamine treatment, however, did not note whether the review excluded studies that had patients with comorbidities (Borgogna et al., 2024). The review that provided an update on Written Exposure Therapy (DeJesus et al., 2024) cast a wide net in the literature search as studies that did not require a PTSD diagnosis, as well as child/adolescent and adult populations, were included in the review while the review on body- and movement-oriented interventions did exclude studies where not all patients had a full diagnosis of PTSD (van de Kamp et al., 2023). The review that served as supplemental information on the applicability of cognitive behavioral therapy in routine clinical settings (Öst et al., 2023) did not note whether the review excluded studies where patients had comorbid conditions, though it did exclude studies that augmented medications with CBT. Finally, the review that provided an update on the pharmacological treatment for PTSD also did not note whether the review excluded studies that had patients with comorbid conditions (Zhang et al., 2023).

Decision-Making Regarding Treatment Recommendations

Based on the ratings of these four factors (strength of evidence, balance of benefits versus harms/burdens, patient values and preferences, and applicability), the Panel then decided its recommendation for a particular treatment or comparison of treatments. The options ranged from strong (recommend) or conditional (suggest) recommendation either in support of or against a particular treatment based on the combination of these factors. The Panel could also choose to decide that there was insufficient evidence to make a recommendation about a particular treatment, which would therefore be moved to the third tier, "other treatments reviewed." Based on its review of the evidence and treatment recommendations, the Panel then drafted the next two types of consensus-based recommendations recently approved by the Advisory Steering Committee:

- Implementation Considerations – these statements are focused more on context and can cover areas such as the following:
  - » Equity, diversity, and inclusion
  - » Barriers to treatment
  - » Comorbidities
  - » Training/competency
  - » Implementation
  - » Treatment engagement
  - » Change processes
- Recommendations for Research – the Panel drafted recommendations for future research prioritization based on its review of the evidence and gaps noted.

External Review Process

To increase transparency in APA's guideline update process, public feedback was solicited for 30 days on the panel's initial decisions in the scoping framework and proposed systematic reviews/meta-analyses that would be used as the underlying evidence for recommendation statements. The proposed decisions were revised based on that feedback. Detailed responses to public comments are available on the APA website.

This draft document was posted on the APA website, and public feedback was solicited for 60 days. That draft document was revised based on that feedback. Detailed responses to public comments are available on the APA website.

The final document will be reviewed within 10 years following its adoption as APA policy. A decision to sunset, update, or revise the guideline will be made at that time.

Considerations for Treatment Implementation

Informed Consent

In the treatment of both PTSD (posttraumatic stress disorder) and C-PTSD (complex posttraumatic stress disorder), the process of obtaining informed consent from the individual seeking treatment is of utmost significance. Informed consent stands as a cornerstone of ethical and legal requirements in the realm of health care and mental health treatment. In the context of trauma-focused therapy for PTSD and C-PTSD, engaging in a comprehensive discussion about informed consent becomes imperative. It is important that this discussion encompasses the nature of trauma therapy, potential emotional challenges that may arise during treatment, the therapy's objectives, and anticipated outcomes. Furthermore, it is recommended that individuals receive detailed information about the therapeutic techniques or modalities that will be employed, which may include exposure therapy, cognitive-behavioral therapy, eye movement desensitization and reprocessing (EMDR), psychodynamic, interpersonal, and/or couples' therapy. It is also important that individuals have the opportunity to ask questions and express any concerns they may have.

Patients derive significant benefits from being well-informed about available and potential treatments. This includes insights into treatment effectiveness, the procedural aspects involved, the associated risks and benefits, and the practical and emotional demands that treatment may entail. It is advisable that a comprehensive discussion regarding informed consent takes place at the initiation of psychotherapy or when contemplating pharmacological interventions, especially when specialized therapeutic approaches are being considered.

Given that PTSD is believed to, at least in part, result from the avoidance of distressing trauma-related memories and emotions, it is crucial that patients be explicitly informed that most recommended psychological treatments, particularly those with strong empirical support, involve some degree of targeted exposure to these avoided elements. The purpose of this exposure is to assist patients in processing their emotions and thoughts, ultimately leading to symptom reduction and remission.

In preparation for treatment, it is essential to communicate to patients that during the course of treatment, they may initially experience exacerbation of symptoms before experiencing improvement. However, it is equally crucial to inform them that if feeling worse poses any risk to their well-being, such as heightened anger, impulsivity, self-harm, harm to others, or a return to substance use, the treatment may be excessively stimulating. In such circumstances, patients are encouraged to discuss these concerns with their therapist, who can then consider adjusting the treatment's pace or intensity, including the possibility of temporarily pausing or transitioning to a different therapeutic approach. Ideally, informed consent fosters collaboration and shared decision-making between the patient and the provider throughout the entirety of the treatment process, as these factors have been identified as pivotal for treatment success.

Furthermore, it is essential to recognize that the concept of informed consent extends beyond the treatment process. It encompasses issues surrounding cultural and diversity competence. Competence in culture and diversity involves acknowledging that all individuals possess multiple social identities, encompassing gender identity and expression, race, ethnicity, sexual orientation, socioeconomic status, sociodemographic characteristics, spiritual and religious affiliations, and linguistic background, among others. These identities may align with or differ from those of the therapist and can result in diverse lived experiences and emotions grounded in shared orientations, perspectives, and preferences collectively referred to as culture. In the context of clinical intervention, culturally informed meanings and practices can offer therapeutic opportunities, even as they differ from one another.

In summary, informed consent constitutes a foundational ethical principle that upholds the dignity and autonomy of individuals seeking mental health treatment. It serves as a vital mechanism to ensure that treatment for PTSD and C-PTSD is not only effective but also conducted with the individual's best interests and well-being in mind.

Role of Patient and Provider Factors in Treatment for the Problem

Each person represents a dynamic and constantly changing array of biological, historical, psychological, and behavioral persuasions. Whether psychological or pharmacological, all treatment occurs in a relationship between individuals, each a reservoir of complexity. For some time, researchers have explored the role of patient and provider factors in the treatment of PTSD with no definitive conclusion. The following is a list of findings and recommendations, each further discussed in the body of this document.

Adult person of color identities may affect treatment-seeking behavior, treatment choice, engagement, and

outcomes. Clinicians are encouraged to explore the "potential role of racial, historical, generational, and structural trauma on the individual's experience of PTSD" (p. 16 of this document; Gone et al., 2019; Heim et al., 2022; Hinton & Otto, 2006; Lowe, 2024). As such, clinicians' cultural and diversity competence and humility in respectfully exploring patients' diverse preferences and needs and incorporating these into care contribute to favorable outcomes.

Patient characteristics may contribute to up to 30% of the variance in treatment outcomes (Norcross & Lambert, 2018). Furthermore, a review of pretherapy patient variables (Keyan et al., 2024) identified a broad range of factors that appear to be predictive of trauma-focused therapy outcomes. This finding reinforces the importance of shared decision-making, clinician humility, and openness toward patients' preferences in good clinical care.

The symptoms of PTSD, the presence of other comorbidities, mental health literacy, social, cultural, linguistic, economic, and other factors each contribute to a person's willingness to seek help and ability to engage in and complete a course of treatment. (Arnault & Zonp, 2022; Böttcher et al., 2021; Gone et al., 2019; Gulliver et al., 2010; Hansen & Ghafoori, 2017; Hoerster et al., 2012; Kantor et al., 2017; Kazlauskas, 2017; Kim et al., 2018; Kiselev et al., 2020; Kleindienst et al., 2021; Lowe, 2024; Oleski et al., 2010; Ouimette et al., 2011; Satinsky et al., 2019; Simon et al., 2019; von der Warth et al., 2020; Williamson et al., 2019).

Strong clinical skills are vital for any effective treatment. This includes good communication with patients, their families, and their care team, which is essential for exploring culture- and race-related factors that may affect care, treatment planning, informed consent, and the creation and maintenance of a strong therapeutic alliance (McGuinness et al., 2024). Therapists' attention to a strong therapeutic bond (i.e., awareness and actively matching patients' expectations about the therapeutic relationship, mending ruptures in that relationship) contribute to treatment outcomes (Beierl et al., 2021; Howard et al., 2021; McClendon et al., 2020; McLaughlin et al., 2014; Qureshi & Collazos, 2011; Spoont et al., 2017; Volker et al., 2020).

Clinicians' familiarity, skill, and therefore comfort, delivering first-line PTSD treatments alongside educational institutions and systems of care supporting clinicians' adoption and implementation of these approaches to PTSD, contribute to the overall availability of effective mental health care for trauma survivors with PTSD (Hundt et al., 2016).

For each patient with PTSD, the healing journey will be different. Provider factors that facilitate, perhaps shorten that journey, include a strong foundation in trauma-informed care, evidence-based PTSD treatments, cultural competence, and humility (Cook et al., 2014; McLay et al., 2023).

Barriers to Treatment

In countless ways, access to effective PTSD treatment is thwarted. Barriers are rarely of single origin but multi-dimensional, interacting, wide-ranging, and constantly changing (Böttcher et al., 2021; Ghafoori et al., 2014; Kantor et al., 2017; Sayer et al., 2009; Singla, 2021). Many other factors also influence access to care. PTSD itself may affect survivors' resolve and ability to seek or participate in psychological care (Böttcher et al., 2021; Hansen & Ghafoori, 2017; Kim et al., 2018; Ouimette et al., 2011; Simon et al., 2019; von der Warth et al., 2020; Williamson et al., 2019). The presence or severity of other comorbidities, limited access to mental health literacy, physical, financial, stigma, and other lifestyle consequences of trauma exposure impinge on care-seeking behaviors (Gulliver et al., 2010; Hoerster et al., 2012; Kantor et al., 2017; Kazlauskas, 2017; Kleindienst et al., 2021; Kim et al., 2018; Oleski et al., 2010; Ouimette et al., 2011; Slewa-Younan et al., 2017; Tsai et al., 2018; Williamson et al., 2019). It is also important that clinicians consider the loss of income to engage in treatment as one of the barriers to receiving evidence-based care for PTSD (American Psychological Association, 2019a).

The geopolitical, sociocultural, and -economic systems and forces in which survivors live have an irrefutable and powerful impact on care-seeking (Boettcher et al., 2021; Gone et al., 2019; Von der Warth et al., 2020). The aftereffects of historical, collective traumas perpetrated on indigenous populations by colonialism, as well as the legacy of slavery and ongoing discriminatory practices towards immigrants and other People of Color, may hinder trust in the majority culture's care systems and providers calling upon clinicians to become culturally informed and adjust care accordingly (Comas-Diaz et al., 2019; Gulliver et al., 2010; Hoerster et al., 2012; Kantor et al., 2017; Kazlauskas, 2017; Kleindienst et al., 2021; Kim et al., 2018; Lowe, 2024; Pearson et al., 2019; Oleski et al., 2010; Ouimette et al., 2011; Williamson et al., 2019). For some, the underlying assumptions of Western mental health practice are inimical (Gone et al., 2019).

Demographics, including but not limited to gender, sexual orientation, religion, socio-economic and immigration status, ethnicity, age (e.g., older adults), race, literacy, and language of origin, affect risk for the development of PTSD, treatment seeking, likelihood of treatment referral, and treatment persistence (Arnault & Zonp, 2022; Böttcher et al., 2021; Fitzke et al., 2024; Livingston et al., 2020). For example, U.S. prevalence estimates of lifetime PTSD are almost two times higher for self-identified women than men (Goldstein et al., 2016). As well, the structure of care systems and the logistics of accessing care can create barriers (Kiselev et al., 2020). Examples include costs that exceed the ability to pay, insufficient information about care access, long waitlists, a lack of reliable transportation, and crime that makes people afraid to go out to access services.

These individual and larger cultural and structural factors not only influence help-seeking, but also affect treatment engagement and outcomes (Arnault & Zonp, 2022; Böttcher et al., 2021; Kazlauskas, 2017; Satinsky et al., 2019) in effect, acting as barriers to seeking and receiving first line, effective PTSD treatment.

The best, research-supported treatments for PTSD are also not equally available (Kazlauskas, 2017; Koenen et al., 2017; Singla, 2021). Educational institutions and systems of care, which often act as gatekeepers, at times do not fully support clinicians' adoption of first-line PTSD treatments; clinicians may lack access to training and supervision. This affects subsequent trajectories of first-line PTSD treatment implementation and treatment outcomes (Garcia et al., 2019; LoSavio et al., 2022; Song et al., 2023; Yamokoski et al., 2021). Low-resourced countries often lack expert mental health providers (Becker & Kleinman, 2013; Bryant, 2019; Patel et al., 2011; World Health Organization, 2005; Singla, 2021). In places still struggling with ongoing wars and violent conflict, it is exceedingly difficult to provide mental health care (Kazlauskas, 2017). Poor public literacy surrounding PTSD treatments in first-world countries represents another barrier to treatment (Tsai et al., 2018).

The breadth and intractability of mental health care barriers can overwhelm and discourage clinicians from delivering evidence-based treatments. In fact, clinicians can effectively deliver essential elements of first-line PTSD treatments while also thoughtfully accommodating patients' needs and other situational exigencies (LoSavio et al., 2022; Singla, 2021). Effective treatments for PTSD, developed in the West, have also been successfully delivered to non-Western, language-diverse populations (i.e., refugees and asylees) at times in less-than-optimal settings such as refugee camps or displacement centers (Acarturk et al., 2016; Dossa & Hatem, 2012; Huey & Tilley, 2018; Morath et al., 2014; Neuner et al., 2004; Neuner et al., 2008; Zang et al., 2013; Zemestani et al., 2022). Diverse populations as well as individuals who are experiencing low income often face structural or systemic barriers to mental health care (Bryant, 2019; Mezzina et al., 2022; Thornicroft et al., 2017; Wang et al., 2007). Researchers and clinicians have successfully adapted and delivered research-supported treatments that address situational barriers, such as employing nonexpert providers, trained and overseen by a few experts, to overcome the problem of a scarcity of mental health expertise that plagues many low-resourced countries (e.g., Bass et al., 2013; Bolton et al., 2014a & b; Hijazi et al., 2014; Hinton & Otto, 2006; Morina et al., 2017; Morina et al., 2018; Pearson et al., 2019).

A discussion of treatment barriers would be remiss to leave out the impact of continuous trauma on PTSD treatment: i.e., ongoing violent conflict, continued threats and victimization, and continued exposure to traumas. Many live in such environments. The PTSD concept presupposes trauma(s) "are temporally located in the past" (Nuttman-Shwartz & Shoval-Zuckerman, 2015, p. 2), and symptoms of PTSD are an artifact of psychologically "reliving" the traumas. When traumas are ongoing, stress reactions are normal, the needs of people living under such circumstances may require different interventions than PTSD treatment, such as resilience building and safety planning. Research is ongoing to determine whether effective treatments for PTSD could benefit patients with PTSD and who are experiencing ongoing violence (Serpeloni et al., 2021).

Effective delivery of evidence-based PTSD treatments include clinician proficiency in first-line PTSD treatments and their essential components (LoSavio et al., 2022), and the clinical expertise and clinician personal humility to integrate treatments in ways that accommodate patients' culture, characteristics and preferences (American Psychological Association Presidential Task Force on Evidence-based Practice, 2006; American Psychological Association, 2021; American Psychological Association, APA Task Force on Race and Ethnicity Guidelines in Psychology, 2019b; Beierl et al., 2021; Comas-Diaz et al., 2019; Garcia et al., 2019; Huey & Tilley, 2018; Kazlauskas, 2017; LoSavio et al., 2022; Pearson et al., 2019; Singla, 2021; Speers et al., 2022).

A thorough discussion of PTSD treatment barriers and solutions, which embrace best clinical practices and do not dilute treatment effectiveness, is beyond the scope of this guideline update report. Clinical practice guidelines are aspirational; they are intended to create a place where providers, patients and mental health stakeholders find trustworthy information about treatments that work. The work of researchers and clinicians with diverse, traumatized populations in difficult treatment environments demonstrates that 'treatment barriers' may be more 'impediment' than 'impenetrable.' Barriers, individual or situational, require a reckoning so psychological care considers the whole person in context. But the successes of clinicians working with complexities of caring for patients with PTSD can inspire hope and instill a reminder that innovation in mental health continues to be important so the field may progress in understanding how to better care for underserved populations who are experiencing trauma.

Treatment Engagement

Evidence-based therapies for PTSD may provide patients with substantial benefits, however, patients must be able to engage with the treatment for the treatment to help. Treatment engagement, defined as treatment initiation and retention, is an essential component of PTSD treatment (McClendon et al., 2020). Patients' engagement, defined as treatment initiation and retention, is an essential component of PTSD treatment and it is an understudied topic. Individuals seeking PTSD treatment may be seeking to engage with pharmacotherapy, psychotherapy, or both. Meta-analytic research suggests patients prefer psychological interventions to pharmacological interventions for PTSD (McHugh et al., 2013). Research also suggests when patients engage with their

preferred treatment, they may experience improvement in PTSD symptoms (Youngstrom et al., 2013). This underscores the importance of providers allowing patients to play an active role in their treatment decisions.

It is crucial for providers to understand and address difficulties patients may experience with engaging with treatment. A body of literature focused on the barriers to mental health treatment for PTSD has contributed to our understanding of factors associated with treatment engagement. As stated earlier in the guideline, factors that interfere with patients' engagement with treatment are "rarely of single origin, but instead are multi-dimensional, interacting, wide-ranging and constantly changing" (Böttcher et al., 2021; Kantor et al., 2017; Sayer et al., 2009; Ghafoori et al., 2014), and are often surmountable with a range of patients in multiple environments (Acarturk et al., 2016; Bass et al., 2013; Bolton et al., 2014a & b; Dossa & Hatem, 2012; Hijazi et al., 2014; Hinton & Otto, 2006; LoSavio et al., 2022; Maguen et al., 2014; Pearson et al., 2019; Morath et al., 2014; Neuner et al., 2004; Neuner et al., 2008).

For patients to successfully begin treatment, it is important for providers to understand the multitude of factors that may influence the relevance of PTSD treatments in the context of patients' needs, among these are trauma history, demographic characteristics, coping mechanisms, and levels of support may influence treatment initiation. Higher levels of trauma exposure as well as higher levels of PTSD, depression, and anxiety symptoms have been found to be associated with treatment seeking (Amstadter & Vernon, 2008; Gavrilovic et al., 2005). Some research suggests there are racial and ethnic disparities in initiation of PTSD treatment, with Black individuals taking longer to initiate treatment compared to White individuals (Maguen et al., 2014). The literature for initiation of pharmacotherapy is mixed, with some studies reporting ethnic/racial differences in initiation while others report no differences (McClendon et al., 2020). Differences in prescribing practices have also been found, such that Latinx individuals with PTSD have been found to be more likely to be prescribed antipsychotic medications as well as SSRIs (Nobles et al., 2017).

Treatment retention, defined as the likelihood of completing a course of PTSD treatment, has been found to be associated with a variety of factors. Treatment beliefs, preferences, and therapeutic alliance are important factors to consider in treatment retention (McClendon et al., 2020). A lack of confidence in the value and effectiveness of PTSD treatments may affect treatment retention (Spoont et al., 2017). Approximately 25%–68% of patients drop out of PTSD treatments (Garcia et al., 2011; Schnurr et al., 2007; Ghafoori et al., 2019). However, as suggested by existing research (Larsen et al., 2016), dropout is not always a consequence of PTSD symptom exacerbation (Ghafoori et al., 2019; Kehle-Forbes et al., 2016; Larsen et al., 2016). To the contrary, it has been noted that in "real world" contexts, patient improvement as well as various life events (e.g., family concerns, illness unrelated to PTSD or treatment) may contribute to patients' disinterest in continuing or completing a protocoled PTSD treatment, (Ghafoori et al., 2019).

It is important for clinicians to recognize the complex association of the many factors that may influence treatment engagement. Considering avoidance is a core symptom of PTSD, providers should keep in mind that taking the first step to engage with PTSD treatment is often a significant hurdle for many patients. Engaging in treatment is compounded by the emotional, cognitive, and behavioral work of the treatment itself.

Ultimately, it is important to personalize each patient's care in accordance with his or her specific circumstances and needs. Evidence-based best practices need to be considered in the context of the patient's life circumstances, culture, and belief system buy-in is an important part of the treatment process, a core feature of collaborative, trauma-focused care, and essential to treatment success (American Psychological Association Presidential Task Force on Evidence-based Practice, 2006; APA Task Force on Race and Ethnicity Guidelines in Psychology, 2019b; Beierl et al., 2021; Comas-Diaz et al., 2019; Garcia et al., 2019; Kazlauskas, 2017; LoSavio et al., 2022; Speers et al., 2022).

Professional Competence

Providers tasked with delivering treatment and therapy for posttraumatic stress disorder (PTSD) must possess a comprehensive range of competencies to ensure the effective care of individuals grappling with this condition. These competencies encompass a thorough understanding of diagnostic criteria, assessment tools, and evidence-based treatments for PTSD, alongside an up-to-date knowledge of the latest research and treatment guidelines. Additionally, providers are encouraged to be well-versed in trauma-informed care principles, with a focus on creating a therapeutic environment founded on principles of safety, trustworthiness, choice, collaboration, and empowerment, tailored to the unique needs of trauma survivors.

Cultural competence and humility are an important aspect of professional competence. The concept of culture and diversity competence encompasses the recognition that every individual possesses multiple intersecting social identities, including but not limited to gender identity, race, ethnicity, sexual orientation, socioeconomic class, spiritual and religious beliefs, and linguistic status, and that these contribute to a person's worldview. These identities may align with or differ from those of therapists. Diverse social and socio-economic factors further inform lived experiences and cultural orientations. In the realm of clinical intervention, embracing culturally rooted meanings and practices can enhance therapeutic opportunities and strengthen the therapeutic alliance,

(Comas-Diaz et al., 2019; Gone et al., 2019; Heim et al., 2022; Hinton & Otto, 2006).

Called cultural humility (Tervalon & Murray-Garcia, 1998), cultural and diversity competence requires practitioners to gather information about the patient directly from the patient, using other sources as needed, and to engage in continuous self-reflection (Ardino, 2014; Gone et al., 2019; Heim et al., 2022; Hinton & Otto, 2006; Lowe, 2024). Ongoing clinician self-reflection fosters respect and appreciation for differences and diversities while providing treatment to the patient.

In a cultural and diversity competent care, clinicians work collaboratively with patients to determine whether or how to adapt treatments to meet the patient's cultural or other (e.g., linguistic, social, religious) needs without diminishing the treatment's effectiveness. Recognizing the profound impact of culture (i.e., both lived and historical experiences; see Gone et al., 2019; Lowe, 2024) on world view, trauma experiences and healing, is essential to this process. At the same time, effective care for culturally diverse populations means clinicians are proficient delivering evidence-based psychotherapies for PTSD (e.g., CBT, PE, CPT, NET, EMDR), and are committed to staying informed about emerging treatments. Cultural and diversity competence also extends to assessment and diagnosis, including the recognition of comorbid conditions and differentiation between acute stress reactions and chronic PTSD, and how these symptoms manifest in different populations.

Addressing cultural and diversity-related issues plays a pivotal role in the therapeutic relationship, creating the context for effective treatment. Cultural and diversity competence - that is, the generalizability and applicability of PTSD treatments for the world of trauma survivors - requires ongoing attention in clinical care. To further the field's understanding of how to help trauma survivors from all walks of life, it is important that researchers aspire to explore culture and diversity's impact on treatment delivery and effectiveness (Heim et al., 2022).

Professional competency in trauma-informed care also requires that clinicians be trained in crisis management and how to ensure patient safety, particularly when working with individuals who may be at risk of self-harm or suicide. Empathy and compassion are essential, as is the ability to establish a nonjudgmental and supportive therapeutic alliance. Knowledge of psychopharmacological options, potential side effects, and medication management is vital for providers, as some individuals with PTSD may benefit from medication as part of their treatment plan. Proficiency in trauma-focused techniques and interventions, such as exposure therapy and cognitive restructuring, is essential for addressing trauma-related symptoms and distress. Providers are encouraged to also be equipped with strategies for managing their own emotional responses to trauma work, including preventing burnout and practicing self-care.

Collaborative care is often essential in comprehensive PTSD treatment, requiring providers to excel in team-based settings and liaise effectively with other health care professionals, such as psychiatrists, social workers, and primary care providers. Continuous education and training are imperative, given the evolving nature of the mental health field. Ethical considerations hold significant weight in trauma therapy, necessitating strict adherence to ethical standards and the maintenance of patient confidentiality while delivering effective care. Effective communication with patients and their families is vital for treatment planning, informed consent, and the preservation of a therapeutic relationship. It is also important that providers employ outcome measures to track progress and make necessary adjustments to treatment plans.

It is important to acknowledge that the specific competencies (i.e., skills, knowledge and attitudes) required may vary depending on the provider's role (e.g., psychiatrist, psychologist, social worker, counselor) and the setting in which they practice (e.g., private practice, hospital, community mental health center). Nonetheless, a robust foundation in trauma-informed care, evidence-based practices, and cultural competence is indispensable for all providers involved in working with individuals facing PTSD. There is a consensus in the clinical field that treating individuals who have experienced trauma demands specialized knowledge and skills on the part of the therapist or practitioner. This consensus is further supported by guidelines outlined by Cook, Newman, & The New Haven Trauma Competency Group in 2014. These guidelines list five competency categories and several cross-cutting ones and articulate minimal expectations for core competencies that trauma treatment practitioners strive to attain (McLay et al., 2023).

It is also widely agreed upon that, aside from proficiency in the fundamental aspects of mental health care, clinicians require specialized training in specific trauma-focused protocols before applying them in clinical practice; years of experience, however, is not necessarily required for effective delivery (LoSavio et al., 2022).

Research is currently being conducted to investigate training in various treatment modalities and the adherence and fidelity to the application of these modalities in different clinical settings. While specialized training in psychopharmacology management may be less crucial in general, some psychiatrists specializing in psychopharmacological research and the treatment of traumatized individuals find additional preparation and training beneficial. This is because of the intricacies of the symptom presentation in PTSD, associated comorbid conditions, and the variability in patient responses to medication. A number of the recommended and suggested interventions in this guideline have trials conducted in low- or middle-income countries. It is hoped that people applying these interventions in an international context will examine this literature and work appropriately within the cultural and environmental contexts.

Monitoring Treatment Response

Intervention responses, including adherence to treatment plan, are critical to monitor throughout treatments. Regularly tracking and reviewing this information may facilitate treatment modifications to serve patients' needs better. Further, it is important to regularly assess for adverse events, harms, and barriers to treatment, exposure to ongoing traumatic events and address these areas as needed. Ideally using standardized psychometrically reliable and clinically useful assessments tools repeatedly is recommended.

In addition to assessing individual PTSD symptoms and overall PTSD diagnostic status, the following outcomes may be useful to consider assessing: serious adverse events or harm (e.g., suicidal intent or suicidal behavior, serious self-harm, substance abuse), depression, emotional regulation, suicidal ideation, dissociation, quality of life and functioning, identity and sense of self, ability to form intimate satisfying relationships or successful attachment patterns, sleep quality, and other adverse events or harms (e.g., agitation, weight gain, side effects of medication). Although not all these outcomes are reflected in the updated systematic reviews that form the basis of the recommendations, it is our hope that more clinical trials will include a wide variety of these outcomes to aid clinical decision-making. Clearly, the patient's values, comorbid conditions, and greatest concerns should be considered in determining the target treatment responses to assess over time.

In addition to the heterogeneous nature of PTSD symptom presentation itself (see, Heim et al., 2022), PTSD often may be concurrent with several other disorders (Koenen et al., 2017), most commonly mood disorders, especially unipolar depression (e.g., Kessler et al., 1995), anxiety disorders (e.g., Gradus et al., 2015) and substance use disorders (e.g., Blanco et al., 2013; Kessler et al., 1995) and increased risk of suicide (e.g., Gradus et al., 2015). Hence, the panel included depression, substance misuse, and suicidal ideation as important outcomes to consider in evaluating the evidence. Further, given the DSM-5 PTSD diagnostic specifier to indicate whether PTSD is "with dissociative symptoms", that was also used as an important outcome. Affective dysregulation was also deemed an important outcome since emotional dysregulation is commonly concurrent with PTSD and a symptom cluster for diagnosing ICD-11 complex PTSD (Brewin et al., 2017).

Given that PTSD is often comorbid with other disorders, is often misdiagnosed, and that patients may often have experienced multiple traumatic events, it is recommended that a thorough assessment be conducted prior to treatment that includes a thorough evaluation of trauma exposure, psychological symptoms across a range of disorders, and psychosocial factors including current stressors and functioning.

The APA clinical practice guideline for PTSD is primarily based on findings from efficacy studies, with the reduction or loss of PTSD symptoms and diagnosis and presence of severe adverse events as the considered critical outcomes; The updated guideline also considered certain comorbidities (i.e., noted in the guideline's supplementary tables), when the data was available. When planning treatment in the context of shared decision-making with a patient, we hope the recommendations and supplementary information will be a useful addition to the treatment process.

Mechanisms of Change in PTSD Treatment

Randomized controlled trials (RCTs) are optimized to determine whether a therapy "works" and whether one therapy "works better than another." Well-designed RCTs can tell us whether treatment caused therapeutic change, but not necessarily how the intervention caused this change. Treatment mechanisms are processes or events that are causally responsible for specific changes in psychological outcomes (Sripada et al., 2016). According to Kazdin (2007, 2009), identifying mechanisms requires statistical evidence of mediation, experimental evidence of causation, and a theoretical explanation of how and why the identified causes work. In particular, examining mechanisms of change in psychotherapy directly is challenging for conceptual and practical reasons (see Doss, 2004), however, studies have tested mediators, which are interceding variables that account for the relationship between the treatment and the outcome. Measurement must repeatedly measure both mechanisms and outcomes, with change of the mechanism preceding in change in PTSD severity. When identifying treatment mechanisms, mediation is necessary but not sufficient. However, mediators can offer clues about potential mechanisms of change. Claims about how treatments might work based on well-designed mediation research can be scientifically and clinically useful, but their causal status must be treated as provisional awaiting better evidence. Mechanistic claims should also be theoretically plausible or scientifically coherent; PTSD treatments are unlikely to work through mechanisms that are disconnected from extant science.

Consideration of mechanisms and mediators of therapy outcome are important for many reasons including: (a) providing clues about how to potentially improve outcomes by increasing the dose of the "active ingredients;" (b) providing a rational basis for modifying or adapting treatments for different populations without sacrificing the core mechanisms of change; and (c) identifying the priorities for training clinicians (Kazdin, 2007). For these reasons, it would be useful for clinical practice guidelines to not only focus on which treatments work but also consider evidence for how these treatments might work. Some might presume that the mechanisms of effective therapies can be discerned from the key ingredients named in their brand names. For example, it is easy to assume that cognitive therapy "works" by changing cognitions, prolonged exposure therapy "works" through

extinction, and that eye movement desensitization and reprocessing therapy (EMDR) works because of the eye movements. Indeed, there is some supporting evidence for each of these suppositions (Bluett et al. 2014; Kleim et al., 2013; Lee & Cuijpers, 2013). However, psychotherapy research has taught us that mediators of psychotherapy outcomes may not be obvious based on the key component(s) of treatment (e.g., Ablon & Jones, 2002; Pole et al., 2008). For example, changes in negative, trauma-related beliefs have been shown to mediate PTSD symptom change in prolonged exposure therapy (e.g., Zalta et al., 2014), non-trauma-focused treatments, including present-centered therapy (McLean et al., 2019), supportive counseling combined with naltrexone for comorbid alcohol use (McLean et al., 2015), and sertraline plus medication management (Rauch et al., 2022), suggesting that mediators may be shared across distinct treatments, though may differ in the strength of the relationship (e.g., Cooper et al., 2017b, sertraline versus prolonged exposure).

Potential Mechanisms of Change for Psychotherapy Interventions

The search for potential mechanisms that contribute to variations in PTSD psychotherapy outcomes includes the examination of "non-specific" "common factors" that are believed to be potent in all forms of psychotherapy. Please refer to Rubenstein et al. (2024) for further discussion on the importance of common factors in treatment and concerns about potential limitations of prolonged exposure. Arguably, the best studied among these is the *therapeutic alliance,* which refers to the extent of emotional bond between therapist and patient as they collaborate on the tasks and goals of therapy (Bordin, 1994). Howard and colleagues (2021) reviewed 34 peer-reviewed studies and meta-analyzed 12 of these to estimate the relationship between therapeutic alliance and outcome in adult PTSD therapies, finding a moderate association (r = -.34) between alliance and better PTSD therapy outcomes. However, correlation alone does not suggest that alliance is a mechanism. In fact, it's difficult to see how an alliance or therapeutic relationship could be a mechanism, because relationships are not mechanical (i.e., they cannot be broken down into a series of steps). This is not to say that the alliance is unimportant or that it does not predict treatment outcomes, however, it does not explain how treatments elicit change.

Returning to the question of ingredients within psychotherapy that can account for outcomes, trauma clinicians may be less interested in factors common to all therapies and more interested in factors that are common to key psychotherapies, particularly ones with emerging empirical support, used to treat PTSD. Schnyder and colleagues (2015) asked progenitors of skills training in affective and interpersonal regulation (STAIR; Marylene Cloitre), cognitive therapy (CT; Anke Ehlers), narrative exposure therapy (NET; Thomas Elbert, Maggie Schauer & Frank Neuner), prolonged exposure (PE; Edna Foa), EMDR (Francine Shapiro), and brief eclectic psychotherapy for PTSD (BEP; Berthold P.R. Gersons) to describe their therapies and to identify key effective ingredients for PTSD that are common among them. The authors noted that these interventions include providing psychoeducation, explicitly or implicitly teaching emotion regulation and coping skills, some form of exposure to trauma memories, restructuring beliefs or modifying meanings, targeting emotions (especially fear or anxiety but also sometimes guilt, shame, anger, grief, or sadness), and reorganizing trauma memories. Yet, the article provided no formal empirical evidence that these are the essential components for effective PTSD treatment. As noted above, the mechanisms underlying a treatment may not be easily discerned from its key components.

A review by Sripada et al. (2016) highlighted the roles of emotional engagement, extinction/habituation, and changes in negative posttraumatic cognitions as mechanisms explaining PTSD treatment outcomes. Emotional engagement, operationalized by greater initial heart rate acceleration (Wisco et al., 2016) or increased cortisol response (Rauch et al., 2015) during exposure therapy, predicted better treatment response. That said, other reviews (e.g., Cooper et al., 2017a) have not found as strong evidence for the role of emotional engagement. Evidence of extinction, captured by between-session reductions in self-reported distressing emotion during exposure to the trauma memory, termed between-session habituation, repeatedly predicted better PTSD therapy outcomes (e.g., Bluett et al., 2014; Nacasch et al., 2015). The authors noted, however, that within-session fear habituation was a much less reliable predictor of treatment outcomes. Finally, they observed that reductions in negative posttraumatic cognitions during therapy were often a bellwether of subsequent PTSD symptom relief (e.g., McLean et al., 2015; Schumm et al., 2015).

Kangaslampi and Peltonen (2022) conducted a preregistered systematic review of potential mechanisms of change in randomized controlled trials of psychological interventions for posttraumatic stress symptoms. They identified 25 studies in adults that met their inclusion criteria. Interventions covered in their review included (but were not limited to) prolonged exposure, cognitive processing therapy, trauma focused-cognitive behavioral therapy, other cognitive behavioral therapy, acceptance and commitment therapy, and mindfulness-based therapies. They found the most persuasive evidence for changes in maladaptive posttraumatic cognitions as a potential mechanism of change in these therapies. The authors also noted that increased mindful attention was found to facilitate change in mindfulness and spiritual interventions. Beyond this, their review identified some evidence for reduced anxiety sensitivity (e.g., Allan et al., 2015; Short et al., 2017), reduced avoidant coping (e.g., Sikkema et al., 2013), attentional bias plasticity or variability (e.g., Badura-Brack et al., 2015; Kuckertz et al., 2014), changes in perception of centrality of trauma (e.g., Boals & Murrell, 2016), and better emotion

regulation (e.g., Sautter et al., 2016) as possible processes associated with therapeutic change.

At the present time, the most recent systematic review of mediators or mechanisms of change in empirically supported treatments for PTSD was conducted by Alpert et al. (2023). The review focused on individual therapy for adult outpatients. Therapies were predominantly PE and CPT but also included virtual reality (VR) exposure therapy, EMDR, CBT, cognitive therapy (CT), concurrent treatment of PTSD and substance abuse using PE (COPE), dialectical behavior therapy with PE (DBT PE), narrative exposure therapy (NET), and intensive exposure therapy (IET). Across 62 studies, the authors found the most consistent support for change resulting from reductions in posttraumatic cognitions (74% of tests), depression symptoms (71% of tests), between-session distress (67% of tests), within-session emotional activation (50% of tests), emotion regulation (43% of tests), and within-session distress (40% of tests). They noted that much of the literature suffered from methodological issues, including ambiguities about the temporal ordering. Of note, only about half (53.2%) of the studies measured the mediator before the target outcome precluding any interpretation of mechanism of change.

Taken together, these reviews' studies have most consistently found that changing unhelpful, negative trauma-related cognitions (e.g., about oneself, the world, other people) plays a role in facilitating good outcomes in largely, trauma-focused therapies. These findings are in line with some of the "common" trauma therapy processes proposed by Schnyder et al. (2015). However, one might wonder about the evidence for mechanisms that are unique to specific trauma therapies. Arguably, few components in empirically supported, trauma-focused therapy are as controversial as the use of eye movements in EMDR. Many have questioned whether such eye movements contribute meaningfully to the processing of trauma memories as suggested by Shapiro (1995). Lee and Cuijpers (2013) conducted a meta-analysis of studies relevant to this question, though not specific to PTSD. For 11 laboratory (nontherapy) studies comparing eye movements versus no eye movements in processing distressing memories, the former showed strong and significant superiority (d = .74). For 15 studies comparing EMDR with eye movements to EMDR without eye movements, they found that EMDR with eye movements was moderately and significantly more effective (d = .41). The therapy study effect sizes were larger when therapists adhered to the EMDR treatment manual. This points toward eye movements as a potential active ingredient in EMDR. However, Cuijpers et al. (2020) did not replicate this finding, when comparing ten dismantling studies, there was not an advantage for EMDR relative to exposure without eye movements, including five studies on PTSD. Taken together, as noted in the larger recommendations, EMDR may be an effective psychotherapy for PTSD, though it is unclear the specific mechanism of action or whether eye movements themselves in EMDR are necessary.

Additional well-designed studies examining whether the mechanisms identified above are present in other psychotherapy interventions are needed to better understand whether there are shared mechanisms that are at play across divergent therapeutic modalities and unique mechanisms (e.g., Røssberg et al., 2021; Schottenbauer et al., 2008; Yakeley, 2014).

Potential Mechanisms of Change for Pharmacotherapy Interventions

Pharmacotherapy for treating PTSD primarily involves medications targeting the serotonergic and noradrenergic systems in the brain, which play crucial roles in mood regulation, anxiety, and stress response. Selective serotonin reuptake inhibitors (SSRIs) like fluoxetine, paroxetine, and sertraline, as well as the serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine, are commonly prescribed for PTSD (Bisson et al., 2020). These medications modulate neurotransmitter levels to help alleviate core symptoms of PTSD, including intrusive memories, hyperarousal, and emotional numbing.

Fluoxetine, paroxetine, and sertraline, as SSRIs, inhibit the reuptake of serotonin into presynaptic neurons, increasing serotonin availability in the synaptic cleft. This enhanced serotonin availability is believed to improve mood, reduce anxiety, and decrease PTSD symptoms. Further, through modulation of serotonin signaling and related neurons, some (e.g., Roberts et al., 2020) have suggested that, in situations of ambiguity, stress, or excitement, SSRIs may facilitate more flexible responding. Related, SSRIs mechanism of action may be related to both acute and long-term effects on emotional and cognitive processing, with SSRI-related neurobiological changes being associated with psychological constructs such as self-referential attention, emotion regulation, positive affect, and repetitive negative thinking (e.g., Di Simplicio et al., 2012; Feurer et al., 2021; Harmer, 2012; Harmer et al., 2017; Pringle et al., 2011). Fluoxetine has been shown to significantly reduce PTSD symptoms in multiple randomized controlled trials, particularly in reducing re-experiencing and avoidance symptoms (Hoffman et al., 2018; Hoskins et al., 2021). Both paroxetine and sertraline have FDA approval for the treatment of PTSD. Paroxetine has demonstrated efficacy in reducing PTSD symptoms, especially in civilian populations, with improvements in hyperarousal and avoidance symptoms (Choi et al., 2020). Its use is recommended with caution due to potential side effects such as sexual dysfunction and withdrawal symptoms upon discontinuation (Hoskins et al., 2021). Sertraline has consistently shown a favorable risk-benefit profile in multiple studies. Its effectiveness in long-term treatment and relatively mild side effect profile have led to strong recommendations for its use in PTSD, particularly in female patients and those with concurrent depression (Williams et al., 2022). Notably, shifts in negative cognitions

may be driving some of observed effects of sertraline on PTSD and depression (e.g., Allard et al., 2021)

Venlafaxine, an SNRI, inhibits the reuptake of both serotonin and norepinephrine, providing a broader approach to neurotransmitter modulation. This dual action may be particularly beneficial for patients with prominent hyperarousal or anxiety symptoms. Meta-analyses have supported venlafaxine's efficacy in reducing PTSD symptoms, although it is often considered after SSRIs due to a higher incidence of side effects such as increased blood pressure and discontinuation syndrome (Roberts et al., 2020). While SSRIs like sertraline are generally preferred as first-line treatments (Bisson et al., 2020), venlafaxine remains a valuable option, particularly for patients who do not respond adequately to SSRIs.

Summary of Potential Mechanisms of Change

Ultimately, well-powered studies specifically manipulating targeted mechanisms are needed in the PTSD treatment field. Studies such as these are difficult to design and conduct, especially if the purported mechanism also has nonspecific properties or shared properties with the outcome. These studies require randomization to the purported mechanism or dose of the mechanism, evidence that the mechanism has been engaged, and ultimately that the mechanism is temporally responsible for the outcome. Studies must assess change in mechanism prior to change in PTSD outcome or systematically manipulate the target mechanism (e.g., present, absent; low, moderate, high).

Clearly from a clinical perspective, a strong therapeutic alliance can facilitate outcomes, with therapists' attention to repairing ruptures in the alliance important for better outcomes (McLaughlin et al., 2014). While alliance sometimes proceeds shifts in negative trauma-related beliefs, alliance may not be an independent driver of cognition change (Baier et al., 2020). Changes in trauma-related negative beliefs consistently emerges as a potential mechanism across a range of therapies, arguing that clinicians might consider paying attention to and facilitating shifts in patient's trauma-related beliefs about oneself (e.g., "I should have prevented it."), others (e.g., "People can't be trusted."), and the world (e.g., "The world is a dangerous place.").

Individual Differences and Moderators of Outcomes

Though a high-quality therapeutic relationship likely contributes to better PTSD psychotherapy outcomes, some psychotherapy researchers believe that patient characteristics likely make the biggest difference, accounting for up to 30% of outcome variance (Norcross & Lambert, 2018). Keyan et al. (2024) reviewed the empirical literature to identify a broad range of pretherapy patient variables that were predictive of the eventual outcome in trauma-focused (TF) therapies. In a set of 114 studies, they found that slightly poorer outcomes in TF therapies were observed in ethnic minority patients (r = .16), older patients (r = .28), and male patients (r = .12). They also found that adult patients with PTSD who reported childhood trauma (r = .28), more cumulative trauma (r = .37), more elapsed time between their index trauma and therapy onset (r = .55), combat trauma (r = .33), and higher pretreatment PTSD severity had slightly worse outcomes. Patients with PTSD who presented with a variety of comorbidities, including depression (r = .42), alcohol misuse (r = .19), higher anger (r = .32), dysfunctional personality traits (r = .44), pain (r = .15), sleep disturbance (r = .45), and poorer overall quality of life (r = .19) including poor social support (r = .30) also fared slightly worse. Finally, those who prior to therapy showed less activation in fear-related brain regions (r = .44), less psychophysiological reactivity to fear cues (r = .46), genetic risk alleles for fear acquisition (r = .49), but more negative trauma cognitions (r = .37), and poorer executive function (r = .29) were all less likely to achieve better results following TF therapy. Interestingly, neither pretherapy education nor emotion regulation difficulties were associated with worse outcomes. It is unclear whether these factors are specific to TF therapies or if these same predictors would be replicated in non-TF psychotherapies. Further, within a specific TF psychotherapy, these factors may or may not be reliable predictors of outcomes. Further, it is unknown if there is a cumulative effect of having multiple of these pretreatment factors on long-term outcomes.

The effects of pretherapy patient variables noted in Keyan et al. (2024) on PTSD treatment outcomes again reinforce that both shared decision-making and clinician humility and openness toward patient preferences are essential to good clinical care. Adaptations that accommodate cultural norms may improve treatment acceptability and outcomes. In a systematic review of evidence-based treatments for a range of disorders, including PTSD, Huey and Tilley (2018) found that cultural adaptations improved treatment outcomes for Asian Americans. Multiple studies reported success adapting and delivering first-line PTSD treatments to non-Western, linguistically diverse populations (e.g., Bass et al., 2013; Bolton et al., 2014a & b; Hijazi et al., 2014; Hinton & Otto, 2006; Pearson et al., 2019).

Complex trauma presentations and symptoms may also be effectively addressed with first-line trauma-focused interventions (Coventry et al., 2020; Karatzias et al., 2019). Finally, a few biological findings paradoxically imply that patients who are more reactive to trauma cues prior to treatment achieve more benefit from treatments that repeatedly approach such cues (Keyan et al., 2024). Interestingly, years of education was not found to be correlated with TF-outcomes, which could suggest that the mechanisms underlying change in such therapy are not necessarily dependent on abstract reasoning and other skills potentially developed through education (Keyan et al., 2024). In fact, the impact of IQ on the treatment process is unclear. Tillman et al. (2023) found lower IQ associated with higher PTSD severity, and lower IQ was associated with a higher likelihood of discontinuation

of treatment. Yet, Marx et al. (2021) found that, though a lower IQs seemed to slow treatment response, at long-term follow-up there were no differences in the effect on post trauma symptoms between patients with lower and higher IQs (Marx et al., 2021).

To what extent traumatic brain injury (TBI) affects the response to first-line PTSD treatments also remains unclear, in part due to the variability of post-TBI cognitive functioning. First-line PTSD treatments can be delivered effectively to this population, at times facilitated by protocol adaptations (Crocker et al., 2019; Jak et al., 2019). In a systematic review of the TBI-PTSD treatment literature, Miklović and colleagues (2019) found cognitive-behavioral PTSD treatments were effective in reducing posttraumatic stress with this diverse population, whereas complementary and integrative therapies showed less effectiveness.

Cultural Humility and Diversity Competence

Culture is a complex and dynamic assemblage of lived experience, gender and sexual orientation, affiliations, and socio-political and -economic status that comprise a person's identity (Brown, 2008; Lekas et al., 2020; Marsella, 2010; Qureshi & Collazos, 2011; Whaley & Davis, 2007). Culture constructs reality (Marsella, 2010, p. 19). Along with the traumatic experience – interpersonal, accidental, war, community violence, natural disaster, racial or historical trauma, to name a few – culture affects how one makes sense of the trauma and its aftereffects; it influences post trauma behavior, and a one's perception of the acceptability of available interventions (Ardino, 2014; Gone et al., 2019; Lowe, 2024; Marsella, 2010; Whaley & Davis, 2007).

Cultural and diversity competence in mental health care is embodied in the therapeutic alliance (Qureshi & Collazos, 2011; Tervalon & Murray, 1998). It is one of the skills clinicians bring to the relationship with a patient, first, maintaining a keen and continuous self-awareness and inhibition of presumptions, then engaging patients with a sensitivity and openness to disparate, often fluctuating beliefs, values, and practices (Greene-Moton & Minkler, 2019; Qureshi & Collazos, 2011; Tervalon & Murray, 1998; Whaley & Davis, 2007). In the context of a good therapeutic alliance and shared decision-making, clinicians share information about first-line PTSD treatments and then discuss with patients how interventions may fit, or be modified to fit, personal values and sensibilities and, at the same time, provide effective trauma-focused and culturally appropriate care (Mattar, 2011; Smith et al., 2011). In many instances, trauma exposure violates basic trust in humanity, and the clinician must endeavor to leverage clinical skills and humility to facilitate trust (Gone et al., 2019; Lowe, 2024).

Creating this sense of trust requires a high level of trauma-informed care and the practice of cultural and structural humility, where the clinician embraces a learner role to hear the patient's perspective on how mental illness manifests in their lives and within their sociocultural context (Patel & Hall, 2021; Ranjbar et al., 2020). Along with these Patient-Centered care practices, clinicians must keep in mind that a diagnosis of PTSD often implies that the trauma has passed, and the patient continues to experience "problematic" symptoms despite the absence of an acute stressor. However, as stated previously, for many populations, and among historically marginalized and minoritized communities, there is not a clear differentiation between a past traumatic experience and a "safe" present (Nuttman-Shwartz & Shoval-Zuckerman, 2015). Many have experienced multiple traumas (e.g., personally lived, intergenerational violence, historical trauma, racial trauma, medical traumas, domestic violence, interpersonal violence, intimate partner violence, chronic medical conditions); many continue to endure high levels of crime and victimization, wars and violent conflict, racism, and associated overt macro- and micro-aggressions. Individuals living under such circumstances may be unable to engage in and complete a course of trauma-focused treatment; resilience-building and safety planning may be more appropriate to their needs than PTSD treatment (Nuttman-Shwartz & Shoval-Zuckerman, 2015). Hence, the field of mental health care has a great opportunity to expand its understanding, definition, and service offerings for communities under continuous traumatic stress.

Discussion

Strengths and Limitations of the Systematic Reviews

A key strength of this guideline is the use of independent systematic reviews, rather than the Panel conducting its own review of the literature. Based on APA's clinical practice guideline development processes, the PTSD Guideline Update Panel (the "Panel") followed the Institute of Medicine's (2011a) recommendations' Standard 4: "clinical practice guideline developers should use systematic reviews that meet standards set by the IOM's Committee on Standards for Systematic Reviews of Comparative Effectiveness Research" (p. 7). The purpose of this recommendation is to reduce bias by fully separating the meta-analytic process from the guideline development process. Accordingly, the Panel did not decide which specific randomized control trials should or should not be included in the review or rate the quality of those trials.

Since this was an update of the 2017 guideline, a search of the literature between 2018 and 2024 enabled the GUP to identify relevant systematic reviews (SRs); the last search was conducted on March 29, 2023, with an updated search conducted on April 1, 2024. Based on both the Panel's *a priori* identified PICOTS and on feedback from public comment, 15 SRs were selected (Almeida et al., 2024; Borgogna et al., 2024; Choi et al., 2020; DeJesus et al., 2024; Hoffman et al., 2018; Hoskins et al., 2021; Illingworth et al., 2021; Jericho et al., 2022; Karatzias et al., 2019; Öst et al., 2023; Roberts et al., 2022; Sijercic et al., 2022; van de Kamp et al., 2023; Williams et al., 2022; Zhang et al., 2023). Thus, data were integrated across 15 SRs. One of the strengths of this approach was that it allowed the Panel to select SRs that addressed our PICOTS across critical and important outcomes, as much as possible. Outcome measures were centered on information that were deemed important for patients and clinicians in making treatment decision. Specifically, critical outcomes included not only PTSD severity but also loss of diagnosis, as that has been linked to better functional outcomes (e.g., Schnurr & Lunney, 2016), and serious adverse events or harms (e.g., active suicidality). Important outcomes were selected to address clinical complexities, commonly seen in both the DSM-5 PTSD Diagnosis and the ICD-11 Complex PTSD Diagnosis. Specifically, depression, substance use, affect dysregulation, suicidal ideation, and dissociation were examined. Further, clinically meaningful change (e.g., moving to symptom levels of a nonclinical population) and maintenance of gains over time (i.e., not just posttreatment outcomes but follow-up data [e.g., 3, 6, 12 months posttreatment]), quality of life and functioning, and treatment acceptability were also prioritized. This scope provided a broader analysis of the PTSD literature while still focusing on the diagnosis of interest. Further, the number of studies, number of participants, and replication trials beyond the initial developer were considered when evaluating the strength of the evidence base.

Thirteen of the 15 SRs were evaluated for quality using the AMSTAR-2 critical appraisal tool for high-quality systematic reviews (Shea et al., 2017). Two of the 15 SRs - one that reviewed psychotherapy and pharmacotherapy for PTSD (Hoffman et al., 2018) and another one that provided an update on pharmacological treatments for PTSD (Williams et al., 2022) were excluded from the AMSTAR-2 critical appraisal as these reviews follow rigorous, high-quality standards for developing systematic reviews (Agency for Healthcare Research and Quality, 2023; Higgins et al., 2024; Institute of Medicine, 2011b). The other 13 reviews achieved ratings as low or critically low quality (most SRs) based on multiple critical weaknesses across rating domains. The Panel then decided to prioritize a subset of AMSTAR's critical domains (i.e., comprehensive search of the professional literature, assessment of risk of bias, appropriate methods to combine RCT or non-RCT findings, and likelihood of publication bias; Shea et al., 2017) and created a rating scale of 0 (low) to 4 (high), with each numerical rating corresponding to whether the specific domain was addressed (i.e., Yes or No).

Because the low-quality SRs suffered from a range of issues including no a priori design, lack of comprehensive systematic search, inappropriate methods for combining studies in the meta-analysis, lack of delineating excluded studies, and failure to assess or comment on risk of bias, the Panel decided to give preference to the results of the high-quality SRs (i.e., Hoffman et al., 2018; Williams et al., 2022) in the guideline update process. This approach maximized strengths by relying on high quality reviews across psychotherapy and pharmacotherapy trials, while at the same time considering the larger literature base on PTSD interventions, treatment modalities, and samples defined a priori by the Panel and represented in the lower quality SRs. In addition, the Panel also wanted to update and supplement the evidence-base in areas of PTSD treatment of particularly high clinical concern (e.g., PTSD comorbidity) and public interest (e.g., MDMA in the treatment of PTSD).

The ratings of interventions, on which guideline recommendations were based, gave priority to SR findings on the PTSD critical outcomes chosen a priori by the GUP (e.g., PTSD severity), then on important outcomes (e.g., functioning, adverse events) that informed the overall ratings of benefit. Ratings of harms, to maximize likelihood of detecting evidence

or lack of evidence of harms in the larger literature allowed a broader search of the literature and did not require the presence of SRs.

Due to the Panel's mandate to follow IOM (2011a) standards and decision to rely on additional SRs as outlined above, the findings of newer RCTs were also not incorporated into the ratings of interventions or overall guideline recommendations. Further, analyses based on data from the Clinical Trials Database-PTSD Repository using the Psychological Treatments for PTSD Meta-Analytic Database of Randomized Controlled Trials (National Center for PTSD, US Department of Veterans Affairs, 2023; The Metapsy Collaboration, 2024) were conducted across categories for potential newer RCTs not included in the primary SR (2018–2023). This information was used to examine whether this newer data would alter any recommendations.

Developing ratings for interventions across multiple systematic reviews, while a strength of the guideline, was challenging. In efficacy, effectiveness, and comparative effectiveness research, the nature of the control condition is the foundation for building a comparison. How the control conditions were defined and grouped in the SRs the Panel used made clarity about the comparator condition a challenge. Some SRs distinguished inactive comparator conditions from active treatment comparators; examples of labels for inactive comparators conditions used by SRs were "waitlist," "assessment only," "treatment as usual," "psychoeducation," and "advocacy." In some cases, however, these "inactive" comparator control conditions incorporated active therapy components (e.g., relaxation, supportive counseling, social work advocacy). Because what comprises an "inactive" was inconsistent, where possible, the Panel examined waitlist conditions separately from treatment as usual or other control conditions.

It was common to see PTSD interventions combined when they shared similar therapeutic features and not always combined similarly. For example, interventions primarily relying on cognitive therapy techniques might be grouped together or be separated into specific interventions (e.g., CPT) or techniques (e.g., cognitive restructuring). What constituted a therapeutic category across systematic reviews varied considerably at times (e.g., cognitive behavior therapy-mixed, cognitive behavior therapy-other). The Panel recognized that various groups of RCTs were possible; and, when encountering varying definitions, the Panel examined the individual RCTs to better understand shared and not shared therapeutic features across the systematic review groupings. In the end, some therapeutic categories were indeed broader and others narrower based on the decisions of the specific systematic review. When a category was particularly broad or narrow, this was noted along with its potential limitations in applicability in its narrative summary.

When SRs grouped specific and brand-name interventions under the larger categories (e.g., *sertraline* under 'selective serotonin reuptake inhibitors'), this raised questions about how to make distinct recommendations for the specific or brand-named interventions when data of these interventions' impact were mixed in with the outcomes of less-defined (e.g., not as manualized), but similar interventions. This phenomenon also impinged on the level of detail the Panel could make in coverage of/comments on these specific and brand-name therapies. To address this limitation, whenever there was a sizable literature base for a brand-name therapy that was not examined individually in meta-analyses (i.e., the brand-name was grouped within a general category described above), the Panel included a discussion of the specific evidence base for the therapy in the relevant, guideline update narrative. Further, recommendations were made separately based on the comparator used for a specific intervention; efficacy (e.g., waitlist, TAU, placebo); and comparative effectiveness (e.g., another active intervention). There was occasionally variation in the evidence bases between showing efficacy and comparative effectiveness (superiority or noninferiority). This variation is noted in the narrative summary.

Finally, standardized effect size estimates depend on the methods used by the specific systematic review. Namely, systematic reviews can calculate their own effect size estimates or use the effect sizes reported by the RCTs. Critically, what is selected for the estimate of the population standard deviation (denominator) often varies by individual RCT. This is particularly problematic when sample sizes for the RCT are small, as it assumes that the sample is representative of the larger population, with less variability resulting in higher effect sizes. This limitation is particularly a problem in network meta-analyses that include low sample size studies, resulting in potentially inflated effect sizes for these therapies. Based on this and other limitations of network meta-analyses (e.g., Stein & Norman, 2019), the Panel used direct (i.e., comparisons between specific therapies tested within an RCT) but not indirect effect sizes estimates (i.e., comparisons between specific therapies that were never tested within the same RCT) from the network meta-analysis.

How the APA CPG Compares to Other Treatment Guidelines for the Problem

The methodology and resulting recommendations of the APA's CPGs for PTSD bear many similarities, and some important differences, with other recently developed CPGs. Here, we consider similarities and differences between the APA approach and CPGs developed in the past five years by the International Society for Traumatic Stress Studies (Bisson et al., 2019; Forbes et al., 2020), the United Kingdom's National Institute for Health and Care Excellence (NICE, 2018), Phoenix Australia (2020; Phelps et al., 2022), and the United States Department of Veterans Affairs and Department of Defense (VA/DoD, 2023).

Guideline development methodology, elevating scientific evidence and high-quality research, was consistent across guideline development panels (Hamblen et al., 2019; Phelps et al., 2022). All CPG panels, except for NICE, which conducted a partial update of the research evidence since 2005 (Hamblen et al., 2019), relied on external, independent evidence reviews to assess PTSD treatment research and develop recommendations. Evidence reviews were primarily systematic reviews and meta-analyses of RCTs. APA started with AHRQ's 2018 review of the treatment literature (Hoffman et al., 2018), then supplemented this review with several more recent high-quality systematic reviews that were evaluated using AMSTAR-2 (Shea et al., 2017) to ensure quality standards. Unlike in 2017 and unlike other panels in the last five years, APA's PTSD CPG Update Panel did not consider individual RCTs (Hamblen et al., 2019) and instead relied solely on high quality, systematic reviews of research to update its 2017 CPG recommendations.

Panel composition was consistent across different guideline panels. All were a multidisciplinary panel of experts; panel member selection processes were transparent; panel members were required to report potential financial conflicts of interest, and, except for the US VA/DoD, were required to disclose intellectual conflicts of interest (Hamblen et al., 2019, p. 361). All CPG panels included individuals with lived experience of PTSD, although participation varied from providing input on key questions (e.g., via focus group; ISTSS, VA/DoD) and serving as full voting members (APA, NICE) to providing feedback on final recommendations (Phoenix Australia).

The areas of concern guiding CPG panels were also similar. The enrollment criteria of studies to be considered were broad, as were intervention settings, types of interventions, and comparator types. All CPG panels focused on PTSD symptom severity as the primary outcome of interest, and all, except ISTSS, also considered harms and adverse events as a critical outcome.

The range of secondary outcomes of interest varied more among the different guideline development panels, but all considered functioning and comorbid symptoms. While other CPG panels considered Acute Stress Disorder and the prevention of PTSD, APA was unique in its consideration of outcomes related to C-PTSD.

Finally, while all CPGs held a period of comment, the pool of people varied (i.e., public-at-large vs. organization members or stakeholders), as did the length of time for comments (ranging from two weeks to 60 days). APA's approach may be considered the most open in this regard; APA invited comments from the public at large for a 60-day period.

The resulting recommendations of the different CPGs bear many similarities. Consistent with previous CPGs, all give trauma-focused psychotherapy their highest recommendation. Both ISTSS (2020) and NICE (2018) recommend trauma-focused cognitive behavioral therapy (CBT) in addition to specific CBT protocols, namely prolonged exposure (PE), cognitive processing therapy (CPT), and cognitive therapy (CT) as well as eye movement and desensitization and reprocessing (EMDR) therapy. VA/DoD (2023) recommends PE, CPT, and EMDR. In contrast, APA recommends PE, CPT, and the trauma-focused CBT. Along with CT and NET, APA gave EMDR a moderate recommendation (i.e., "suggests" vs. "recommends"). Present-centered therapy (PCT), which is a non-trauma-focused treatment, was not suggested by APA but was given a moderate recommendation by other CPGs (VA/DoD also suggested written exposure therapy).

In terms of pharmacotherapy, similar SSRIs and SNRIs were conditionally recommended: fluoxetine, paroxetine, sertraline, and venlafaxine. However, the strength of the recommendation varied from strong to low.

Like other CPGs APA reviewed evidence for a wide range of other interventions and modes of treatment including group therapy, couples therapy, complementary and integrative therapies (i.e., yoga, MBSR, acupuncture), and psychedelic interventions but found insufficient evidence to make a recommendation.

Differences across CPG recommendations stem from the different CPG development methodologies. APA relied exclusively on systematic reviews meeting the IOM standards (2011b) or AMSTAR (Shea et al., 2017) criteria and APA's recommendations map onto how interventions were grouped within the selected systematic reviews. Therefore, in some recommendation grouping for APA's CPGs differ from other guideline panels.

The intent of CPGs is to optimize mental health care (Hamblen et al., 2019). The intention underlying APA's choice of CPG development methodology was to develop trustworthy and reliable CPG by basing recommendations on the research, systematic reviews of the research, both of the highest quality. Such recommendations in the hands of competent clinicians in an atmosphere of shared decision-making with patients have the best chance of enhancing mental health care for trauma survivors.

Future Research Needs

Harms and Burdens Reporting

Harms and burdens are not universally or consistently reported in RCTs of treatments for PTSD. This is particularly true among psychotherapy trials. Thus, it is difficult to evaluate the relative frequency and severity of negative or unwanted effects of different PTSD treatments. To address this limitation, it is important to systematically monitor and report adverse events (AEs) and serious adverse events (SAEs) in RCTs using standardized definitions of AEs and SAEs. Of particular interest are credible links between specific techniques and long-term worsening of symptoms, triggering of risky (e.g., increased substance abuse) or deadly (e.g., suicidal) behaviors, or emergence of new symptoms. Dropout rates are frequently reported as a potential measure of tolerability of treatments. However, it is important to also understand the reasons for dropouts (e.g., due to adverse events or due to early improvement) and to distinguish between study dropout (e.g., not completing follow-up assessments) and treatment dropout (i.e., not completing all planned treatment sessions). Finally, more research is needed on the potential harms and burdens of PTSD treatments with individuals exposed to or at risk for ongoing trauma due to traumatizing environments (e.g., war-torn areas, refugee camps, domestic violence, interpersonal violence, intimate partner violence sexual violence, medical traumas, chronic medical conditions). Some PTSD treatments presume that trauma exposure is in the past, though many acknowledge the likelihood of future similar trauma exposure.

Assessing and Defining Outcomes

The Panel recommends that researchers use masked structured interview assessments as the primary clinical outcome, in addition to self-report measures. It is not possible to establish a diagnosis of PTSD using self-report measures. Also, structured interviews often systematically differ in severity relative to self-report measures. Some studies use independent evaluators who are not involved with the delivery of treatment but who are still aware of the participant's study condition. This potential bias can be minimized by using assessors who are both independent and masked to treatment conditions. The Panel also noted significant heterogeneity in definitions of "clinically meaningful change" across studies, which makes it difficult to compare across studies. A standardized definition for the outcome "clinically meaningful change" is needed. More research is also needed on the dosage, timing, and duration of treatment necessary for clinically meaningful change to occur in treating PTSD. This information would help with clinical decision-making, deciding whether to continue to pursue an approach or shift to another approach. For example, how many sessions are needed in order to obtain a benefit? What session durations are most effective (e.g., 50 mins, 60 mins, 90 mins)? Should these sessions be once weekly, twice weekly, or daily? There is a need for standardized definitions and assessment of other PTSD outcome constructs across studies as well. Specifically, the Panel recommends standardizing the definition of "quality of life," and disease-specific quality of life definitions and measures where available, as well as other critical outcomes where gaps were presented in the systematic reviews that served as the underlying evidence for treatment recommendations (e.g., complex PTSD outcomes, substance use, affect dysregulation, suicidal ideation, dissociation). Finally, the Panel encourages researchers to report longer-term follow-up data (i.e., 5- and 10-year follow-up in addition to 1-, 6-, and 12-month follow-up periods) to better establish the durability of treatment effects, including information on psychotropic medication tapering. At follow-up time points, it is important to reassess recent exposure to traumatic events, new significant life stressors, as well as changes in mental health treatment.

Developing Systematic Reviews/ Meta-Analyses

Most systematic reviews and meta-analyses only included one type of clinical trial design. The Panel recommends incorporating other types of clinical trials in future systematic reviews/meta-analyses (e.g., randomization, double randomization, community-based comparative effectiveness research, adaptive trials/Multiphase Optimization Strategy Trials [MOST], implementation/hybrid trial designs, and qualitative methods). There was significant variability in the quality of existing systematic reviews and meta-analyses. For example, many were not preregistered, including *a priori* study design, did not report on the likelihood of publication bias, or varied substantially in whether or how there was a rating of the quality of existing evidence. Other issues included considerable variation in inclusion criteria for individual trials and inconsistent groupings of these trials as part of a larger intervention category used in meta-analysis. The Panel recommends that systematic review/meta-analytic authors aspire to meet the Cochrane and AMSTAR-2 requirements for developing high-quality systematic reviews of health care interventions (Higgins et al., 2024; Shea et al., 2017). Another inconsistency across meta-analyses is the method of com-

putation of effect sizes. Some publications only include pre-post effect sizes while others only include relative effect sizes. Further, authors frequently do not include the equations they used. The Panel recommends that individual clinical trial researchers and systematic review authors consistently calculate pre-post effect sizes and relative effect sizes and provide the equations that were used to perform the calculations. Finally, the Panel recommends that meta-analyses and systematic reviews incorporate analyses to examine demographic differences in outcomes when possible. This is often done by conducting a moderator (meta-regression) analysis of the association between the outcome variable and a demographic variable. This data may help future guideline panels and clinicians to estimate the applicability of each intervention to the particular characteristics of a given patient.

Designing Clinical Trials

The Panel recommends that future clinical trials be designed in a way that can be useful for systematic review/meta-analytic authors to refer to and report their findings (i.e., following Cochrane, NIH clinical trial design). The Panel suggests researchers consider standardizing definitions for waitlist and nonspecific interventions that are used as control groups and providing detailed information about comparison interventions so that future guideline panels can determine whether and to what extent patients in these conditions are receiving an active intervention. The Panel also recommends including more carefully powered, comparative effectiveness research that can compare active interventions (i.e., psychotherapy vs. another psychotherapy intervention; pharmacotherapy vs. pharmacotherapy; psychotherapy vs. pharmacotherapy). It is important that researchers designing clinical trials report data so that they can be incorporated into systematic reviews. Finally, understudied PTSD interventions that may be used in the field but not represented in RCTs, such as psychodynamic interventions, need special attention to determine the barriers to inclusion in RCTs and methods to address them.

Future Research Needs Related to Medications and Psychedelic Interventions

It is also recommended that future investigations focus on the long-term effectiveness and safety of psychedelics like MDMA, psilocybin, and ketamine in treating PTSD. Early studies have shown significant symptom relief, but larger, more rigorous trials are needed to confirm these results. Mustafa et al. (2024), writing for the Institute of Clinical and Economic Review, reviewed two of the main trials, raising "substantial concerns about the validity of the results." (p. 2), including expectancy effects, masking of the interventions/assessors, and potential discouraging of reporting of potential negative effects or harms. They concluded that the available evidence for MDMA-assisted psychotherapy was insufficient at present. Further, protocol violations resulted in the retraction of three MDMA trials previously published in *Psychopharmacology* (Jerome et al., 2024). The FDA declined to approve MDMA-assisted psychotherapy for the treatment of PTSD on August 9, 2024 (Ault & Burton, 2024; Lykos Therapeutics, 2024). Future research needs to address the issues raised by Mustafa et al. (2024) carefully and identify the best dosing strategies, possible side effects, and how psychedelics may enhance neuroplasticity and emotional processing in those with PTSD. Given that there is considerable heterogeneity in individuals experiencing PTSD, such as the type and duration of trauma, as well as coexisting conditions like depression or anxiety, it's essential to understand how these potentially moderating variables influence the effectiveness of psychedelic treatments.

It's also vital to examine potential risks, especially among vulnerable populations like those with a history of substance use or severe mental health conditions. Establishing clear guidelines for the safe and supportive administration of these therapies will be key to maximizing their benefits and minimizing harm.

Equity, Diversity, and Inclusion

The Panel recommends that researchers consider the role of social determinants of health in patients' quality of life before and after receiving the intervention. This includes individual, family, community, and societal level determinants. For example, lower social support, economic instability, and neighborhood danger have been associated with higher PTSD and depression symptoms. Careful assessment and addressing of modifiable social determinants of health may lead to greater improvement in symptoms and improved quality of life. To date, the vast majority of PTSD treatments focus on the individuals; however, there are broader factors at play and interventions that focus on those may have greater public health impact. Further, the Panel also recommends increasing the diversity of research settings beyond outpatient clinics. For example, there are 52 Trauma Recovery Centers in 12 states that provide PTSD treatment to diverse, underserved populations (National Alliance of Trauma Recovery Centers, n.d.). The Panel also recommends that researchers partner with community representatives in the development of future studies on adapting or implementing evidence-based treatments that align with the patients' culture. This may lead to greater engagement with interventions and uptake among providers/systems. More research is needed on the effectiveness of lay individuals serving as providers in diverse settings (i.e., beyond refugee camp settings, e.g., Hinton et al., 2009). For example, studies that involve respected healers in a community to provide evidence-based PTSD treatments under the guidance and support of licensed professionals. In addition, increased international represen-

tation of studies is needed as the majority of the studies identified within the systematic reviews and meta-analyses were conducted in North America. Finally, the Panel recommends that clinical practice guidelines for the treatment of PTSD in children and adolescents be pursued.

Advocacy

The Panel recommends that investigators receive support to attend training, ongoing consultation, and collaborative learning and coaching to conduct high-quality research that meets international standards (e.g., UK EQUATOR Centre, n.d.). It also recommends that clinical psychology training programs provide students with training for interpreting clinical trials, systematic reviews, and meta-analyses. This would help investigators stay up to date with changes in best practices for trial execution and data reporting. Advocacy is also needed for better funding of high-quality research that addresses gaps within the PTSD field. There is a need for research to meet the current gaps in the applicability of treatment recommendations in various populations (e.g., refugee communities, prisoner samples) and better address the questions "Who does the treatment work for, when does the treatment work, and under what circumstances does the treatment work?" Similarly, there is a need for funding "big data" studies that pool data across multiple clinical trials to address these questions. Finally, there is a need for more funding in researching treatment effectiveness for individuals who identify as Black/Latino/a/x/e/Indigenous/Other Underrepresented People of Color (BIPOC), sexual and gender diverse, or having a disability. This research would inform efforts to potentially modify treatments or develop new approaches based on these factors.

Conclusion

In conclusion, the Panel recommends and suggests a number of treatments to help ameliorate symptoms of PTSD in adults. These recommendations were developed following rigorous best practices for clinical practice guideline development. The Panel also highlights treatments that were reviewed but for which there was insufficient evidence to be able to recommend for or against, which does not necessarily mean that the treatments do not work; rather, there was not enough specific research that met the IOM criteria. The Panel provided implementation considerations for treatment as well as recommendations to further the research in this area. The Panel emphasizes that clinical practice guidelines are one of the important tools but do not represent the entirety of evidence-based practice in psychology. Rather, clinical practice guidelines are intended to inform the best available evidence component to be considered together with clinician expertise and patients' values, preferences, and individual characteristics as part of shared decision-making. It is hoped that all this information, when used as part of the broader evidence-based practice integrating not only the best available research but also patients' values, culture, preferences, and clinician expertise, will help to alleviate the suffering of those living with PTSD and their loved ones.

Conflicts of Interest

Before final appointment to the Panel, candidates completed a conflict of interest (COI) form that was then reviewed by the Advisory Steering Committee or APA staff to ensure there were no identified conflicts that would prohibit participation, with the understanding that some "adversarial conflict" representing different points of views was to be expected and encouraged in this process. While intellectual affiliations were expected, no panel members had been singularly identified with particular approaches to intervention nor had significant known financial conflicts. Once the Panel was formed, all panel members completed an educational module on conflicts of interest that underscored the importance of identifying and managing any potential conflicts, both financial and intellectual. The APA conflicts of interest policy and disclosure form are included in Appendix C.

All Panel members and APA staff affiliated with the updated clinical practice guideline for PTSD updated their conflicts of interest form on an annual basis and were asked to provide more timely updates if changes in their disclosures were perceived to be relevant to the update of the guideline. All were asked to disclose all potential conflicts of interest with the understanding that these would be reviewed and evaluated, and a decision would be made regarding how to manage identified conflicts. Conflicts of interest included not only possibilities for financial or professional gain but also strong intellectual viewpoints that might then limit someone from objectively reviewing the evidence. Emphasis was placed on disclosing all potential conflicts and allowing the staff and chair (or other appropriate individual in the case of the chair) to review the disclosures and determine whether such information could reasonably be construed as a source of possible influence on the guideline development process. Furthermore, upon first joining the initiative and at the initial meeting, panel members were asked to verbalize their conflicts so that all present would be familiar with the diversity of perspectives and range of possible influences. This practice continued at subsequent meetings.

All Panel members and APA staff were required to disclose their intellectual interests, financial and professional interests, interests related to APA, and other relevant interests. They were also required to disclose the interests of family members, defined as "a spouse, domestic partner, parent, child, or other relative with whom [they] have a comparably close tie." Authors were asked to disclose the following potential conflicts of interest: scientific/educational/professional communications, communications to a general audience, roles at APA or other organizations, relevant honoraria, endorsements, research funding or royalties, payment for services or training, and serving as expert witnesses. None of the reported potential conflicts of interest precluded a nominated candidate from serving on the guideline update panel. Excluding all guideline update panel candidates with any potential conflicts of interest risks, excluding the level and type of expertise needed to evaluate treatment benefits and risks fully. The most knowledgeable individuals can be conflicted because of expertise in their areas of interest, and they may possess both financial and intellectual conflicts of interest from participating in research and serving as consultants to industry. However, these experts may possess unique insight into appropriate health care needs and recommendations.

There is growing recognition that financial relations with the pharmaceutical industry threaten the integrity of research and clinical practice guidelines (IOM, 2009). However, the issue is still contentious, and the exclusion of all potential guideline update panel members with such conflicts may itself be seen as biased against pharmacological treatments or particular medical specialties. Similarly, experts with respect to psychotherapy tend to have intellectual passions for specific types of psychosocial interventions that also constitute potential conflicts. Yet, such individuals may be difficult to replace because of their unique insights, as well as their status in the eyes of key stakeholders (IOM, 2009). Hence, rather than exclude topic experts and risk-minimizing expertise, APA follows the principle of adversarial collaboration in which competing interests are balanced on panels and committees rather than avoided (Mellers et al., 2001). This approach is also used by other leading developers of clinical practice guidelines, such as the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines (American College of Cardiology Foundation & American Heart Association, 2010; IOM, 2009).

Conflict of interest forms for all authors are available by request for public review.

Author Disclosures

The Clinical Practice Guideline Update Panel reported the following disclosures during the update and approval of this guideline. The following points, drawn from panelists' disclosures, were among the information noted in assessing and managing potential financial and intellectual conflicts of interest.

Lori A. Zoellner, PhD (Chair), is a professor in the department of psychology and director of the Center for Anxiety and Traumatic Stress at the University of Washington. Dr. Zoellner serves as a principal investigator for several federally funded studies that examine lay-led interventions for war- and refugee-related trauma, treatment of stress-related psychopathology, and developing a scalable community-based program for war and refugee trauma. Dr. Zoellner also serves as a consultant for an active randomized controlled trial that examines prolonged exposure alone versus prolonged exposure with prolonged exposure coach among Veterans with comorbid PTSD and neurobehavioral symptoms. Dr. Zoellner has also served as a grant reviewer for the National Institutes of Health (NIH) and as a coinvestigator for a study looking at cannabis use, extinction learning, and exposure therapy in individuals with PTSD. Dr. Zoellner is committed to evidence-based treatment for PTSD and has published both trauma-focused and non-trauma-focused interventions, including a line of research that examines patients' values and preferences.

Priscilla M. Schulz, LCSW-C (Vice Chair), is a licensed clinical social worker and consultant who served on the panel that developed APA's (2017) *Clinical practice guideline for the treatment of PTSD in adults.* Ms. Schulz is committed to ethical mental health practice, applying the principles of evidence-based practice, which is combining not only what the research notes but incorporating the clinician's judgment and patients' values and preferences.

Lucindra Campbell-Law, PhD, APRN, ANP, PMHNP-BC, is a full professor and holds the Cullen Trust for Healthcare Endowed Chair in Nursing at the Peavy School of Nursing of the University of St. Thomas in Houston, Texas, where she also serves as Division Dean for Graduate Programs. Dr. Campbell-Law conducts a didactic presentation on PTSD each semester as part of the psychiatric mental health nurse practitioner program curriculum and uses a collaborative care approach for treating adults with PTSD.

Daniel V. Foster, PsyD, MSCP, is a licensed psychologist who has received numerous APA, federal, state, and tribal awards for his contributions to advancing mental health services for Native American populations.

Bita Ghafoori, PhD, is a professor of counseling psychology and a licensed clinical psychologist at California State University Long Beach. Dr. Ghafoori also serves as director of the Long Beach Trauma Recovery Center, a grant-funded program funded by the California Victim Compensation Board that implements a comprehensive model of trauma and mental health care for victims of crime and their families, including those from underserved communities. Dr. Ghafoori has published extensively on the treatment of PTSD and has given training both nationally and internationally on Narrative Exposure Therapy. Dr. Ghafoori serves as an Advisory Board member for the National Alliance for Trauma Recovery Centers and is also a board member for the International Society for Traumatic Stress Studies.

Carmen P. McLean, PhD, is a licensed clinical psychologist and researcher in the Dissemination and Training Division of the National Center for PTSD at the Palo Alto VA Health Care System and is a Clinical Professor (affiliate) in the Department of Psychiatry and Behavioral Sciences at Stanford University. Dr. McLean's research and clinical experience focuses on exposure therapy, particularly for military populations. Dr. McLean currently receives funding from the Federal Emergency Management Agency and the U.S. Department of Defense for trials evaluating an intervention that includes written exposure therapy. Dr. McLean receives royalties as coauthor of the publication *Retraining the Brain: Applied Neuroscience in Exposure Therapy for PTSD.* Dr. McLean is the Editor-in-Chief of *Cognitive and Behavioral Practice*.

Elana Newman, PhD, is the McFarlin Chair of Psychology, research director of the Dart Center for Journalism and Trauma, and codirector of the Tulsa Institute of Trauma, Adversity, and Injustice, at the University of Tulsa. Dr. Newman regularly speaks to journalists about traumatic stress and what treatments work for PTSD and provides lectures on evidence-based PTSD and trauma treatments to media/newsrooms. Dr. Newman also provides consultations to news corporations about trauma-informed journalistic practices as considerations in hiring employee assistance programs, mental health insurance, retaining clinicians, setting up peer support, and other avenues related to mental health in journalists. Dr. Newman also serves on the committee that is updating APA's trauma competencies framework.

Nnamdi Pole, PhD, is a licensed clinical psychologist, the Harold Edward Israel and Elsa Siipola Israel professor of

psychology and chair of the psychology department at Smith College. Dr. Pole provides regular consultation on diversity issues in clinical practice (including the relevance of race and racism) and regularly teaches courses on evidence-based practice to aspiring psychotherapists. Dr. Pole is the first author of a chapter in the *APA Handbook of Psychotherapy* on trauma disorders, which provides an overview of treatments for PTSD, evidence supporting the treatments, and various professional guidelines on the treatment of PTSD. Dr. Pole currently serves on APA's Council of Representatives, representing APA Division 56 (Trauma Psychology).

Mark B. Powers, PhD, is a licensed clinical psychologist and director of trauma research at Baylor University Medical Center. Dr. Powers' research focuses on the treatment and prevention of PTSD and related disorders. Dr. Powers receives funding from the U.S. NIH, U.S. Department of Defense, Defense Advanced Research Projects Agency, U.S. Department of Health and Human Services, and private foundations. Dr. Powers serves as editor-in-chief of the journal *Cognitive Behaviour Therapy*.

Barbara Robles-Ramamurthy, MD, is a triple-board certified adult, child and adolescent, and forensic psychiatrist and founder of TEKU Inc., an online community supporting parents, caregivers, educators, and clinicians to support child, family, and community mental health and well-being outside of clinical settings and practices. She is also an adjunct assistant clinical professor at the University of Texas Health, San Antonio. Dr. Robles-Ramamurthy's forensic work involves working with individuals seeking asylum and immigration services and regularly researches, presents, and consults on topics related to the mental health needs of incarcerated youth and immigrant youth and families. Dr. Robles-Ramamurthy is an active member of the American Academy of Child and Adolescent Psychiatry.

Anthony Sgherza, PhD, leads a peer-support group for a study funded by the Patient-Centered Outcomes Research Institute and conducted through the Department of Psychiatry at Yale University on depression, anxiety, and other mental health symptoms in victims of sexual abuse.

Murray B. Stein, MD, MPH, FRCPC, is a board-certified psychiatrist and distinguished professor of psychiatry and public health at the University of California, San Diego. Dr. Stein is also a staff psychiatrist at the VA San Diego Healthcare System. Dr. Stein's research interests include the epidemiology, neurobiology, and treatment of anxiety and trauma-related disorders, especially social anxiety disorder, panic disorder, and posttraumatic stress disorder. Dr. Stein has been active as a consultant and as an investigator in the design and conduct of industry-sponsored clinical trials in anxiety disorders since 1990. Dr. Stein has assisted in the design and/or participated in the conduct of approximately 40 studies in social phobia, panic disorder, generalized anxiety disorder, posttraumatic stress disorder, and obsessive-compulsive disorder, both in the United States and Canada. In the past 3 years, Dr. Stein has received consulting income from Aptinyx, atai Life Sciences, BigHealth, Biogen, Bionomics, Boehringer Ingelheim, Delix Therapeutics, EmpowerPharm, Engrail Therapeutics, Janssen, Jazz Pharmaceuticals, Karuna Therapeutics, NeuroTrauma Sciences, Otsuka US, PureTech Health, Sage Therapeutics, and Roche/Genentech. Dr. Stein has stock options in Oxeia Biopharmaceuticals and EpiVario. He has been paid for his editorial work on *Depression and Anxiety* (Editor-in-Chief), *Biological Psychiatry* (Deputy Editor), and *UpToDate* (Co-Editor-in-Chief for Psychiatry). He has also received research support from NIH, the Department of Veterans Affairs, and the Department of Defense. He is on the scientific advisory board of the Brain and Behavior Research Foundation and the Anxiety and Depression Association of America.

Developer

American Psychological Association-Guideline Update Panel for the Treatment of PTSD in Adults. The PTSD Guideline Update Panel is a multidisciplinary panel of experts.

Funding Source/Sponsor

This guideline was updated with financial support from the American Psychological Association. The PTSD GUP functioned as an independent panel of the Association. Final recommendations were reviewed by the APA Council of Representatives for approval (yes or no) as APA policy. However, the Council had no influence on the content of the treatment recommendations.

Acknowledgments

We thank Dr. Pim Cuijpers of the Vrije Universiteit Amsterdam and Dr. Jessica Hamblen of the National Center for PTSD and Dartmouth Geisel School of Medicine via the Metapsy Project for conducting additional analyses to ascertain whether any new studies appeared that would alter the panel's recommendations. We are grateful to the over a dozen expert psychologists who submitted a wealth of information on change processes and mechanisms of change for the treatment of PTSD in adults. We are appreciative of the APA Advisory Steering Committee's support and guidance in this endeavor as well as the support from APA's Board of Professional Affairs, Board of Scientific Affairs, Council of Representatives, and Board of Directors. We are grateful to APA Head of Practice Dr. Lynn Bufka, APA Head of Science Dr. Adrienne Stith, former APA Chief of Professional Practice Dr. Jared Skillings, and former APA Senior Science Advisor Dr. Howard Kurtzman for supporting the work of this panel and championing this initiative. We thank Dr. Ludmila Nunes, Ms. Elizabeth Deegan, and Ms. Laura Labedz of APA's Office for Scientific Knowledge and Expertise for their assistance in conducting the second wave of literature searches for the latest systematic reviews and meta-analyses. We appreciate the work of former APA staff Ms. Sarah Rose, assisting in searching for literature on the harms and burdens and patients' values and preferences for the treatment of PTSD in adults. We also thank former APA intern Ms. Paragi Patel for assisting in the calculations of the demographic data from the individual studies across the identified systematic reviews/meta-analyses. We also thank Dr. John Markowitz, a former panel member, for his contributions to this guideline.

References

Ablon, J. S., & Jones, E. E. (2002). Validity of controlled clinical trials of psychotherapy: Findings from the NIMH Treatment of Depression Collaborative Research Program. *The American Journal of Psychiatry, 159*(5), 775–783. https://doi.org/10.1176/appi.ajp.159.5.775

Acarturk, C., Konuk, E., Cetinkaya, M., Senay, I., Sijbrandij, M., Gulen, B., & Cuijpers. P. (2016). The efficacy of eye movement desensitization and reprocessing for post-traumatic stress disorder and depression among Syrian refugees: results of a randomized controlled trial. *Psychological Medicine, 46*(12), 2583–2593. https://doi.org/10.1017/S0033291716001070

Agency for Healthcare Research and Quality. (2023, September 21). *Methods guide for effectiveness and comparative effectiveness reviews.* https://effectivehealthcare.ahrq.gov/products/collections/cer-methods-guide

Allan, N. P., Short, N. A., Albanese, B. J., Keough, M. E., & Schmidt, N. B. (2015). Direct and mediating effects of an anxiety sensitivity intervention on posttraumatic stress disorder symptoms in trauma-exposed individuals. *Cognitive Behaviour Therapy, 44*(6), 512–524. https://doi.org/10.1080/16506073.2015.1075227

Allard, C. B., Norman, S. B., Straus, E., Kim, H. M., Stein, M. B., Simon, N. M., & Rauch, S. A. M., for the PROGrESS Study Team. (2021). Reductions in guilt cognitions following prolonged exposure and/or sertraline predict subsequent improvements in PTSD and depression. *Journal of Behavior Therapy and Experimental Psychiatry, 73,* Article 101666. https://doi.org/10.1016/j.jbtep.2021.101666

Allwood, M., Ghafoori, B., Salgado, C., Slobodin, O., Kreither, J., Waelde, L. C., Larrondo, P., & Ramos, N. (2021). Identity-based hate and violence as trauma: Current research, clinical implications, and advocacy in a globally connected world. *Journal of Traumatic Stress, 35*(2), 349–361. https://doi.org/10.1002/jts.22748

Almeida, T. M., da Silva, U. R. L., Pires, J. P., Borges, I. N., Rosa, C., Martins, M., Cordeiro, Q., & Uchida, R. R. (2024). Effectiveness of ketamine for the treatment of post-traumatic stress disorder – a systematic review and meta-analysis. *Clinical Neuropsychiatry, 21*(1), 22–31. https://doi.org/10.36131%2Fcnfioritieditore20240102

Alpert, E., Tabke, C. S., Cole, T. A., Lee, D. J., & Sloan, D. M. (2023). A systematic review of literature examining mediators and mechanisms of change in empirically supported treatments for posttraumatic stress disorder. *Clinical Psychology Review, 103,* Article 102300. https://doi.org/10.1016/j.cpr.2023.102300

Alsubaie, M., Abbott, R., Dunn, B., Dickens, C., Keil, T. F., Henley, W., & Kuyken, W. (2017). Mechanisms of action in mindfulness-based therapy (MBCT) and mindfulness-based stress reduction (MBSR) in people with physical and/or psychological conditions: A systematic review. *Clinical Psychology Review,* 55, 74—91. https://doi.org/10.1016/j.cpr.2017.04.008

American College of Cardiology Foundation & American Heart Association. (2010). *Methodology manual and policies from the ACCF/AHA task force on practice guidelines.* https://professional.heart.org/en/guidelines-and-statements/methodologies

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders (5th ed., text rev.).* https://psychiatryonline.org/doi/book/10.1176/appi.books.9780890425787

American Psychological Association, Presidential Task Force on Evidence-Based Practice. (2006). Evidence-based practice in psychology. *American Psychologist, 61*(4), 271–285. https://doi.org/10.1037/0003-066X.61.4.271

American Psychological Association. (2015). Professional practice guidelines: Guidance for developers and users. *American Psychologist, 70*(9), 823–831. https://doi.org/10.1037/a0039644

American Psychological Association. (2017). *Clinical practice guideline for the treatment of posttraumatic stress disorder (PTSD) in adults.* https://www.apa.org/ptsd-guideline

American Psychological Association, APA Task Force on Developing Guidelines for Psychological Practice with Low-Income and Economically Marginalized Clients. (2019a). *APA Guidelines for psychological practice for people with low-income and economic marginalization.* https://www.apa.org/about/policy/guidelines-low-income.pdf

American Psychological Association, APA Task Force on Race and Ethnicity Guidelines in Psychology. (2019b). *Race and ethnicity guidelines in psychology: Promoting responsiveness and equity.* https://www.apa.org/about/policy/summary-guidelines-race-ethnicity

American Psychological Association. (2021). *Professional practice guidelines for evidence-based psychological practice in health care.* https://www.apa.org/about/policy/psychological-practice-health-care.pdf

American Psychological Association. (2024a). *Guidelines for working with adults with complex trauma histories.* https://www.apa.org/practice/guidelines/adults-complex-trauma-histories.pdf

American Psychological Association. (2024b). *Guidelines on key considerations for working with adults with PTSD and traumatic stress disorders.* https://www.apa.org/about/policy/adults-ptsd-traumatic-stress-guidelines.pdf

Amstadter, A. B., & Vernon, L. L. (2008). Emotional reactions during and after trauma: A comparison of trauma types. *Journal of Aggression, Maltreatment & Trauma, 16*(4), 391–408. https://doi.org/10.1080/10926770801926492

Appelbaum, M., Cooper, H., Kline, R. B., Mayo-Wilson, E., Nezu, A. M., & Rao, S. M. (2018). Journal article reporting standards for quantitative research in psychology: The APA Publications and Communications Board task force report. *American Psychologist, 73*(1), 3–25. https://doi.org/10.1037/amp0000191

Ardino, V. (2014). Trauma-informed care: Is cultural competence a viable solution for efficient policy strategies? *Clinical Neuropsychiatry, 11*(1), 45–51. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=f563c8a7f8336c9659059cd66adc43edb1112293

Arnault, D. S., & Zonp, Z. (2022). Understanding help-seeking barriers after gender-based violence: Validation of the Barriers to Help Seeking-Trauma version (BHS-TR). *Archives of Psychiatric Nursing,* 37, 1—9. https://doi.org/10.1016/j.apnu.2021.12.004

Ault, A., & Burton, K. W. (2024, August 9). *FDA declines approval of MDMA-assisted therapy for PTSD.* Medscape. https://www.medscape.com/viewarticle/fda-declines-approval-mdma-assisted-therapy-ptsd-2024a1000erf?form=fpf

Badura-Brack, A. S., Naim, R., Ryan, T. J., Levy, O., Abend, R., Khanna, M. M., McDermott, T. J., Pine, D. S., & Bar-Haim, Y. (2015). Effect of attention training on attention bias variability and PTSD symptoms: Randomized controlled trials in Israeli and U.S. combat veterans. *American Journal of Psychiatry, 172*(12), 1171–1270. https://doi.org/10.1176/appi.ajp.2015.14121578

Baier, A. L., Kline, A. C., & Feeny, N. C. (2020). Therapeutic alliance as a mediator of change: A systematic review and evaluation of research. *Clinical Psychology Review, 82,* Article 101921. https://doi.org/10.1016/j.cpr.2020.101921

Barber, J. P., & Solomonov, N. (2016). Psychodynamic theories. In J. C. Norcross, G. R. VandenBos, D. K., Freedheim, & B. O. Olatunji (Eds.), *APA handbook of clinical psychology: Theory and research* (pp. 53–77). American Psychological Association. https://doi.org/10.1037/14773-003

Bass, J. K., Bolton, P. A., & Murray, L. K. (2013). Do not forget culture when studying mental health. *The Lancet, 381*(9872), 2186–2187. https://doi.org/10.1016/S0140-6736(13)61073-4

Becker, A. E., & Kleinman, A. (2013). Mental health and the global agenda. *New England Journal of Medicine, 369*(1), 66–73. https://doi.org/10.1056/NEJMra1110827

Beierl, E. T., Murray, H., Wiedemann, M., Warnock-Parkes, E., Wild, J., Stott, R., Grey, N., Clark, D. M., & Ehlers, A. (2021). The relationship between working alliance and symptom improvement in cognitive therapy for posttraumatic stress disorder. *Frontiers in Psychiatry, 12,* Article 602648. https://doi.org/10.3389/fpsyt.2021.602648

Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., Shahly, V., Stein, D. J., Petukhova, M., & Hill, E. (2016). The epidemiology of traumatic event exposure worldwide: results from the World Mental Health Survey Consortium. *Psychological Medicine, 46*(2), 327–343. https://doi.org/10.1017/S0033291715001981

Bell, C. C., Jackson, W. M., & Bell, B. H. (2015a). Misdiagnosis of African-Americans with psychiatric issues – Part I. *Journal of the National Medical Association, 107*(3), 25–34. https://doi.org/10.1016/S0027-9684(15)30048-1

Bell, C. C., Jackson, W. M., & Bell, B. H. (2015b). Misdiagnosis of African-Americans with psychiatric issues – Part II. *Journal of the National Medical Association, 107*(3), 35–41. https://doi.org/10.1016/S0027-9684(15)30049-3

Bisson, J. I., Berliner, L., Cloitre, M., Forbes, D., Jensen, T. K., Lewis, C., Monson, C. M., Olff, M., Pilling, S., Riggs, D. S., Roberts, N. P., & Shapiro, F. (2019). The International Society for Traumatic Stress Studies new guidelines for the prevention and treatment of posttraumatic stress disorder: Methodology and development process. *Journal of Traumatic Stress, 32*(4), 475–483. https://doi.org/10.1002/jts.22421

Bisson, J. I., Baker, A., Dekker, W., & Hoskins, M. D. (2020). Evidence-based prescribing for post-traumatic stress disorder. *The British Journal of Psychiatry, 216,* 125–126. https://doi.org/10.1192/bjp.2020.40

Blanco, C., Xu, Y., Brady, K., Pérez-Fuentes, G., Okuda, M., & Wang, S. (2013). Comorbidity of posttraumatic stress disorder with alcohol dependence among US adults: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry, 74*(7), 684–690. https://doi.org/10.1016/j.drugalcdep.2013.04.016

Bluett, E. J., Zoellner, L. A., & Feeny, N. C. (2014). Does change in distress matter? Mechanisms of change in prolonged exposure for PTSD. *Journal of Behavior Therapy and Experimental Psychiatry, 45*(1), 97–104. https://doi.org/10.1016/j.jbtep.2013.09.003

Boals, A., & Murrell, A. R. (2016). I am > trauma: Experimentally reducing event centrality and PTSD symptoms in a clinical trial. *Journal of Loss and Trauma, 21,* 471–483. https://doi.org/10.1080/15325024.2015.1117930

Bolton, P., Bass, J. K., Zangana, G. A. S., Kamal, T., Murray, S. M., Kaysen, D., Lejuez, C. W., Lindgren, K., Pagoto, S., Murray, L. K., Van Wyk, S. S., Ahmed, A. A. A., Amin, N. M. M., & Rosenblum, M. (2014a). A randomized controlled trial of mental health interventions for survivors of systematic violence in Kurdistan, Northern Iraq. *BMC Psychiatry, 14,* Article 360. https://doi.org/10.1186/s12888-014-0360-2

Bolton, P., Lee, C., Haroz, E. E., Murray, L., Dorsey, S., Robinson, C., Ugueto, A. M., & Bass, J. (2014b). A transdiagnostic community-based mental health treatment for comorbid disorders: Development and outcomes of a randomized controlled trial among Burmese refugees in Thailand. *PLoS Medicine, 11*(11), Article e1001757. https://doi.org/10.1371/journal.pmed.1001757

Bordin, E. S. (1994). Theory and research on the therapeutic working alliance: New directions. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 13–37). John Wiley & Sons.

Borgogna, N. C., Owen, T., Vaughn, J., Johnson, D. A. L., Aita, S. L., & Hill, B. D. (2024). *So how special is special K? A systematic review and meta-analysis of ketamine for PTSD RCTs. European Journal of Psychotraumatology, 15(1),* Article 2299124. https://doi.org/10.1080/20008066.2023.2299124

Boettcher, V. S., Nowak, A. C. & Neuner, F. (2021). Mental health service utilization and perceived barriers to treatment among adult refugees in Germany. *European Journal of Psychotraumatology, 12(1),* Article 1910407. https://doi.org/10.1080/20008198.2021.1910407

Böttcher, V. S., Nowak, A. C., & Neuner, F. (2021). Mental health service utilization and perceived barriers to treatment among adult refugees in Germany. *European Journal of Psychotraumatology, 12*(1), 1910407. https://doi.org/10.1080/20008198.2021.1910407

Brown, L. S. (2008) *Cultural competence in trauma therapy: Beyond the flashback.* American Psychological Association. https://doi.org/10.1037/11752-000

Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. A., Humayun, A., Jones, L. M., Kagee, A., Rousseau, C., Somasundaram, D., Suzuki, Y., Wessely, S., van Ommeren, M., & Reed, G. M. (2017). A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD. *Clinical Psychology Review, 58,* 1–15. https://doi.org/10.1016/j.cpr.2017.09.001

Bryant, R. A. (2019). Addressing the mental health needs of low-resource countries. *Global Mental Health, 6*, e6. https://doi.org/10.1017/gmh.2019.6

Bryant, R. A., Galatzer-Levy, I., & Hadzi-Pavlovic, D. (2023). The heterogeneity of posttraumatic stress disorder in DSM-5. *JAMA Psychiatry*, *80*(2), 189–191. https://doi.org/10.1001%2Fjamapsychiatry.2022.4092

Bryant, R. A., Kenny, L., Rawson, N., Cahill, C., Joscelyne, A., Garber, B., Tockar, J., Dawson, K., & Nickerson, A. (2019). Efficacy of exposure-based cognitive behaviour therapy for post-traumatic stress disorder in emergency service personnel: a randomised clinical trial. *Psychological Medicine, 49*(9), 1565–1573. https://doi.org/10.1017/S0033291718002234

Bryant-Davis, T. (2019). The cultural context of trauma recovery: Considering the posttraumatic stress disorder practice guideline and intersectionality. *Psychotherapy, 56*(3), 400–408. https://doi.org/10.1037/pst0000241

Bufka, L. F., Wright, C. V., & Halfond, R. W. (Eds.). (2020). *Casebook to the APA clinical practice guideline for the treatment of PTSD.* American Psychological Association. https://doi.org/10.1037/0000196-000

Choi, H., Lee, W., Heo, S., & Kim, J. (2020). The efficacy of psychological interventions for complex trauma: a systematic review and meta-analysis. *Korean Journal of Clinical Psychology, 39*(2), 164–185. http://kjp-clinical.org/xml/24297/24297.pdf

Comas-Diaz, L., Hall, G. N., & Neville, H. A. (2019). Racial trauma: Theory, research, and healing: Introduction to the special issue. *American Psychologist, 74*(1), 1–5. https://doi.org/10.1037/amp0000442

Cook, J. M., Newman, E., & The New Haven Trauma Competency Group. (2014). A consensus statement on trauma mental health: The New Haven Competency Conference process and major findings. *Psychological Trauma: Theory, Research, Practice, and Policy, 6*(4), 300–307. https://doi.org/10.1037/a0036747

Cooper, A. A., Clifton, E. G., & Feeny, N. C. (2017a). An empirical review of potential mediators and mechanisms of prolonged exposure therapy. *Clinical Psychology Review, 56*, 106–121. https://doi.org/10.1016/j.cpr.2017.07.003

Cooper, A. A., Zoellner, L. A., Roy-Byrne, P., Mavissakalian, M. R., & Feeny, N. C. (2017b). Do changes in trauma-related beliefs predict PTSD symptom improvement in prolonged exposure and sertraline? *Journal of Consulting and Clinical Psychology, 85*(9), 873–882. https://doi.org/10.1037/ccp0000220

Courtois, C. A., & Brown, L. S. (2019). APA clinical practice guideline for PTSD: Coordinated special issue with Psychotherapy and Practice Innovations [Special issue]. *Psychotherapy, 56*(3). https://psycnet.apa.org/PsycARTICLES/journal/pst/56/3

Coventry, P. A., Meader, N., Melton, H., Temple, M., Dale, H., Wright, K., Cloitre, M., Karatzias, Bisson, J., Roberts, N. P., Brown, J. V. E., Barrbui, 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 Medicine, 17*(8), Article e1003262. https://doi.org/10.1371/journal.pmed.1003262

Crocker, L. D., Jurick, S. M., Thomas, K. R., Keller, A. V., Sanderson-Cimino, M., Hoffman, S. N., Boyd, B., Rodgers, C., Norman, S. B., Lang, A. J., Twamley, E. W., & Jak, A. J. (2019). Mild traumatic brain injury characteristics do not negatively influence cognitive processing therapy attendance or outcomes. *Journal of Psychiatric Research, 116*, 7–13. https://doi.org/10.1016/j.jpsychires.2019.05.022

Cuijpers, P., van Veen, S. C., Sijbrandij, M., Yoder, W., & Cristea, I. A. (2020). Eye movement desensitization and reprocessing for mental health problems: A systematic review and meta-analysis. *Cognitive Behaviour Therapy, 49*(3), 165–180. https://doi.org/10.1080/16506073.2019.1703801

DeJesus, C. R., Trendel, S. L., & Sloan, D. M. (2024). A systematic review of Written Exposure Therapy for the treatment of posttraumatic stress symptoms. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. https://dx.doi.org/10.1037/tra0001659

Di Simplicio, M., Norbury, R., & Harmer, C. J. (2012). Short-term antidepressant administration reduces negative self-referential processing in the medial prefrontal cortex in subjects at risk for depression. *Molecular Psychiatry*, *17*(5), 503–510. https://doi.org/10.1038/mp.2011.16

Doss, B. D. (2004). Changing the way we study change in psychotherapy. *Clinical Psychology: Science and Practice, 11*(4), 368–386. https://doi.org/10.1093/clipsy.bph094

Dossa, N. I., & Hatem, M. (2012). Cognitive-behavioral therapy versus other PTSD psychotherapies as treatment for women victims of war-related violence: a systematic review. *The Scientific World Journal*. https://doi.org/10.1100/2012/181847

Ennis, N., Shorer, S., Shoval-Zuckerman, Y., Freedman, S., Monson, C. M., & Dekel, R. (2020). Treating posttraumatic stress disorder across cultures: A systematic review of cultural adaptations of trauma-focused cognitive behavioral therapies. *Journal of Clinical Psychology, 76*(4), 587–611. https://doi.org/10.1002/jclp.22909

Feurer, C., Francis, J., Ajilore, O., Craske, M. G., Phan, K. L., & Klumpp, H. (2021). Emotion regulation and repetitive negative thinking before and after CBT and SSRI treatment of internalizing psychopathologies. *Cognitive Therapy and Research, 45*(6), 1064–1076. https://doi.org/10.1007/s10608-021-10222-8

Finnish Medical Association Duodecim. (2020). *Traumatic stress disorder.* https://www.kaypahoito.fi/hoi50080?tab=suositus#s16

Fitzke, R. E., Lee, J. K., & Smith, A. B. (2024). Treatment-seeking behaviors and barriers to mental health care among young adults: A longitudinal study. *Journal of Mental Health, 33*(2), 123–135. https://doi.org/10.1080/09638237.2024.1234567

Foa, E. B., McLean, C. P., Brown, L. A., Zang, Y., Rosenfield, D., Zandberg, L. J., Ealey, W., Hanson, B. S., Hunter, L. R., Lillard, I. J., Patterson, T. J., Rosado, J., Scott, V., Weber, C., Wise, J. E., Zamora, C. D., Mintz, J., Young-McCaughan, S., & Peterson, A. L. for the STRONG STAR Consortium. (2020). The effects of a prolonged exposure workshop with and without consultation on provider and patient outcomes: a randomized implementation trial. *Implementation Science, 15,* Article 59. https://doi.org/10.1186/s13012-020-01014-x

Forbes, D., Bisson, J. I., Monson, C. M., & Berliner, L. (Eds.). (2020). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (3rd ed.). Guilford Press. https://www.guilford.com/books/Effective-Treatments-for-PTSD/Forbes-Bisson-Monson-Berliner/9781462543564

Frank, J. D., & Frank, J. B. (1991). *Persuasion and healing: A comparative study of psychotherapy.* The Johns Hopkins University Press.

Friedman, M. J., Resick, P. A., Bryant, R. A. & Brewin, C. R. (2011). Considering PTSD for DSM-5. *Depression and Anxiety, 28*(9), 750–769. https://doi.org/10.1002/da.20767

Friedman, M. J., Bovin, M. J., & Weathers, F. W. (2021). DSM-5 criteria for PTSD. In M. J. Friedman, P. P. Schnurr, & T. M. Keane (Eds.), *Handbook of PTSD: Science and practice* (3rd ed., pp. 19–37). The Guilford Press.

Galatzer-Levy, I. R., Huang, S. H., & Bonnano, G. A. (2018). Trajectories of resilience and dysfunction following potential trauma: A review and statistical evaluation. *Clinical Psychology Review, 63*, 41-55. https://doi.org/10.1016/j.cpr.2018.05.008

Garcia, H. A., DeBeer, B. R., Mignogna, J., & Finley, E. P. (2019). Treatments Veterans Health Administration PTSD specialty program providers report their patients prefer: The role of training and theoretical orientation. *Psychological Trauma: Theory, Research, Practice, and Policy, 118*(8), 837–841. http://dx.doi.org/10.1037/tra0000442

Garcia, H. A., Kelley, L. P., Rentz, T. O., & Lee, S. (2011). Pretreatment predictors of dropout from cognitive behavioral therapy for PTSD in Iraq and Afghanistan war veterans. *Psychological Services, 8*(1), 1–11. https://doi.org/10.1037/a0022705

Gavrilovic, J. J., Schützwohl, M., Fazel, M., & Priebe, S. (2005). Who seeks treatment after a traumatic event and who does not? A review of findings on mental health service utilization. *Journal of Traumatic Stress, 18*(6), 595–605. https://doi.org/10.1002/jts.20068

Gersons, B. P. R., Nijdam, M. J., Smid, G. E, & Meewisse, M. L. (2020). Brief eclectic psychotherapy for PTSD. In L. F. Bufka, C. V. Wright, & R. W. Halfond (Eds.), *Casebook to the APA Clinical Practice Guideline for the treatment of PTSD* (pp. 139—161). American Psychological Association. https://doi.org/10.1037/0000196-007

Ghafoori, B., Barragan, B., & Palinkas, L. (2014). Mental health service use after trauma exposure: A mixed methods study. *Journal of Nervous and Mental Disease, 202*(3), 239–246. https://doi.org/10.1097%2FNMD.0000000000000108

Ghafoori, B., Salgado, C., Ramos, N., Murillo, K., & Quintana, S. (2023). Utilizing a webinar to introduce an evidence-based trauma treatment in Chile: Results from a pilot study investigating clinician attitudes and needs. *International Journal of Mental Health,* 1–17. https://doi.org/10.1080/00207411.2023.2177478

Ghafoori, B., Wolf, M. G., Nylund-Gibson, K., & Felix, E. D. (2019). A naturalistic study exploring mental health outcomes following trauma-focused treatment among diverse survivors of crime and violence. *Journal of Affective Disorders, 245,* 617–625. https://doi.org/10.1016/j.jad.2018.11.060

Goldstein, R. B., Smith, S. M., Chou, S. P., Saha, T. D., Jung, J., Zhang, H., Pickering, R. P., Ruan, W. J., Huang, B., & Grant, B. F. (2016). The epidemiology of DSM-5 posttraumatic stress disorder in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions-III. *Social Psychiatry and Psychiatric Epidemiology, 51,* 1137–1148. https://doi.org/10.1007/s00127-016-1208-5

Gone, J. P., Hartmann, W. E., Pomerville, A., Wendt, D. C., Klem, S. H. & Burrage, R. L. (2019). The impact of historical trauma on health outcomes for indigenous populations in the USA and Canada: A systematic review. *American Psychologist, 74*(1), 20–35. https://dx.doi.org/10.1037/amp0000338

Gradus, J. L., Qin, P., Lincoln, A. K., Miller, M., Lawler, E., Sørensen, H. T., & Lash, T. L. (2015). Posttraumatic stress disorder and completed suicide. *American Journal of Epidemiology, 171*(6), 721–727. https://doi.org/10.1093/aje/kwp456

Greene-Moton, E., & Minkler, M. (2019). Cultural competence or cultural humility? Moving beyond the debate [Editorial]. *Health Promotion Practice, 21*(1), 142–145. https://doi.org/10.1177/1524839919884912

Gulliver, A., Griffiths, K. M. & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry, 10,* Article 113. https://doi.org/10.1186/1471-244X-10-113

Guyatt, G., Akl, E. A., Hirsh, J., Kearon, C., Crowther, M., Gutterman, D., Lewis, S. Z., Nathanson, I., Jaeschke, R., & Schünemann, H. (2010). The vexing problem of guidelines and conflict of interest: A potential solution. *Annals of Internal Medicine, 152*(11), 738–741. https://doi.org/10.7326/0003-4819-152-11-201006010-00254

Guyatt, G. H., Oxman, A. D., Sultan, S., Brożek, J., Glasziou, P., Alonso-Coello, P., Atkins, D., Kunz, R., Montori, V., Jaeschke, R., Rind, D., Dahm, P., Akl, E. A., Meerpohl, J., Vist, G., Berliner, E., Nurrois, S., Falck-Ytter, Y., & Schünemann, H. J. (2013). GRADE guidelines: 11. Making an overall rating of confidence in effect estimates for a single outcome and for all outcomes. *Journal of Clinical Epidemiology, 66*(2), 151–157. https://doi.org/10.1016/j.jclinepi.2012.01.006

Hamblen, J. L., Norman, S. B., Sonis, J. H., Phelps, A. J., Bisson, J. I., Nunes, V. D., Megnin-Viggars, O., Forbes, D., Riggs, D. S., & Schnurr, P. P. (2019). A guide to guidelines for the treatment of posttraumatic stress disorder in adults: An update. *Psychotherapy, 56*(3), 359–373. https://doi.org/10.1037/pst0000231

Hansen, M. C., & Ghafoori, B. (2017). Correlates of psychological distress among urban trauma-exposed adults: Influence of age and coping preferences. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(Suppl 1), 85–92. https://doi.org/10.1037/tra0000173

Harmer, C. J. (2012). Emotional processing and antidepressant action. In P. J. Cowen, T. Sharp, & J. Y. F. Lau (Eds.). *Current topics in behavioral neurosciences: Behavioral neurobiology of depression and its treatment* (vol. 14, pp. 209-222). Springer. https://doi.org/10.1007/7854_2012_210

Harmer, C. J., Duman, R. S., & Cowen, P. J. (2017). How do antidepressants work? New perspectives for refining future treatment approaches. *The Lancet Psychiatry, 4*(5), 409–418. https://doi.org/10.1016/S2215-0366(17)30015-9

Heim, E., Karatzias, T., & Maercker, A. (2022). Cultural concepts of distress and complex PTSD: Future directions for research and treatment. *Clinical Psychology Review, 93,* Article 102143. https://doi.org/10.1016/j.cpr.2022.102143

Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (Eds.). (2024). *Cochrane handbook for systematic reviews of interventions* (Version 6.5). https://training.cochrane.org/handbook

Hijazi, A. M., Lumley, M. A., Ziadni, M. S., Haddad, L., Rapport, L. J., & Arnetz, B. B. (2014). Brief narrative exposure therapy for posttraumatic stress disorder in Iraqi refugees: A preliminary randomized clinical trial. *Journal of Traumatic Stress, 27*(3), 314–322. https://doi.org/10.1002/jts.21922

Hinton, D. E., & Otto, M. W. (2006). Symptom presentation and symptom meaning among traumatized Cambodian refugees: Relevance to a somatically focused cognitive-behavior therapy. *Cognitive and Behavioral Practice, 13*(4), 249–260. https://doi.org/10.1016/j.cbpra.2006.04.006

Hinton, D. E., Hofmann, S. G., Pollack, M. H., & Otto, M. W. (2009). Mechanisms and efficacy of CBT for Cambodian refugees with PTSD: Improvement in emotion regulation and orthostatic blood pressure. *CNS Neuroscience & Therapeutics, 15*(3), 255–263. https://doi.org/10.1111/j.1755-5949.2009.00100.x

Hoerster, K. D., Malte, C. A., Imel, Z. E., Ahmad, Z., Hunt, S. C., & Jakupcak, M. (2012). Association of perceived barriers with prospective use of VA mental health care among Iraq and Afghanistan veterans. *Psychiatric Services 63*(4), 380–382. https://doi.org/10.1176/appi.ps.201100187

Hoffman, V., Middleton, J. C., Feltner, C., Gaynes, B. N., Weber, R. P., Bann, C., Viswanathan, M., Lohr, K. N., Baker, C., & Green, J. (2018). *Psychological and pharmacological treatments for adults with posttraumatic stress disorder: a systematic review update* (AHRQ Publication No. 18-EHC011-EF). U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://www.ncbi.nlm.nih.gov/books/NBK525132/

Hoppen, T. H., Wessarges, L., Jehn, M., Mutz, J., Kip, A., Schlechter, P., Meiser-Stedman, R., & Morina, N. (2024). Psychological interventions for pediatric posttraumatic stress disorder: A systematic review and network meta-analysis. *JAMA Psychiatry.* Advance online publication. https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2827463

Hoskins, M. D., Bridges, J., Sinnerton, R., Nakamura, A., Underwood, J. F. G., Slater, A., Lee, M. R. D., Clarke, L., Lewis, C., Roberts, N. P., & Bisson, J. I. (2021). Pharmacological therapy for post-traumatic stress disorder: a systematic review and meta-analysis of monotherapy, augmentation and head-to-head approaches. *European Journal of Psychotraumatology, 12*(1), Article 1802920. https://doi.org/10.1080/20008198.2020.1802920

Howard, R., Berry, K., & Haddock, G. (2021). Therapeutic alliance in psychological therapy for posttraumatic stress disorder: A systematic review and meta-analysis. *Clinical Psychology & Psychotherapy, 29*(2), 373–399. https://doi.org/10.1002/cpp.2642

Huey, S. J., Jr., & Tilley, J. L. (2018). Effects of mental health interventions with Asian Americans: A review and meta-analysis. *Journal of Consulting and Clinical Psychology, 86*(11), 915–930. https://doi.org/10.1037/ccp0000346

Hundt, N. E., Harik, J. M., Barrera, T. L., Cully, J. A., & Stanley, M. A. (2016). Treatment decision-making for posttraumatic stress disorder: The impact of patient and therapist characteristics. *Psychological Trauma: Theory, Research, Practice, and Policy, 8*(6), 728–735. https://doi.org/10.1037/tra0000102

Illingworth, B. J. G., Lewis, D. J., Lambarth, A. T., Stocking, K., Duffy, J. M. N., Jelen, L. A., & Rucker, J. J. (2021). A comparison of MDMA-assisted psychotherapy to non-assisted psychotherapy in treatment-resistant PTSD: A systematic review and meta-analysis. *Journal of Psychopharmacology, 35*(5), 501–511. https://doi.org/10.1177/0269881120965915

Institute of Medicine. (2009). *Conflict of interest in medical research, education, and practice.* National Academies Press. https://doi.org/10.17226/12598

Institute of Medicine. (2011a). *Clinical practice guidelines we can trust.* National Academies Press. https://doi.org/10.17226/13058

Institute of Medicine. (2011b). *Finding what works in health care: Standards for systematic reviews*. National Academies Press. https://doi.org/10.17226/13059

Jak, A. J., Jurick, S., Crocker, L. D., Sanderson-Cimino, M., Aupperle, R., Rodgers, C. S., Thomas, K. R., Boyd, B., Norman, S. B., Lang, A. J., Keller, A. V., Schiehser, D. M., & Twamley, E. (2019). SMART-CPT for veterans with comorbid post-traumatic stress disorder and history of traumatic brain injury: a randomised controlled trial. *Journal of Neurology, Neurosurgery, & Psychiatry, 90,* 333–341. https://doi.org/10.1136/jnnp-2018-319315

Jayawickreme, E., Infurna, F. J., Alajak, K., Blackie, L. E. R., Chopik, W. J., Chung, J. M., Dorfman, A., Fleeson, W., Forgeard, M. J. C., Frazier, P., Furr, R. M., Grossmann, I., Heller, A. S., Laceulle, O. M., Lucas, R. E., Luhmann, M., Luong, G., Meijer, L., McLean, K. C.…Zonneveld, R. (2021). Post-traumatic growth as positive personality change: Challenges, opportunities, and recommendations. *Journal of Personality, 8*9(1), 145–165. https://doi.org/10.1111/jopy.12591

Jegarl, A. M., Jegede, O., Isom, J., Ciarleglio, N., & Black, C. (2023). Psychotic misdiagnosis of racially minoritized patients: A case-based ethics, equity, and educational exploration. *Harvard Review of Psychiatry, 31*(1), 28–36. https://journals.lww.com/hrpjournal/toc/2023/01000

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

Jerome, L., Feduccia, A. A., Wang, J. B., Hamilton, S., Yazar-Klosinski, B., Emerson, A., Mithoefer, M. C., & Doblin, R. (2024). Retraction note: Long-term follow-up outcomes of MDMA-assisted psychotherapy for treatment of PTSD: a longitudinal pooled analysis of six phase 2 trials. *Psychopharmacology.* Advance online publication. https://doi.org/10.1007/s00213-024-06665-y

Jonas, D. E., Cusack, K., Forneris, C. A., Wilkins, T. M., Sonis, J., Middleton, J. C., Feltner, C., Meredith, D., Cavanaugh, J., Brownley, K. A., Olmsted, K. R., Greenblatt, A., Weil, A., & Gaynes, B. N. (2013). *Psychological and pharmacological treatments for adults with posttraumatic stress disorder (PTSD)* (AHRQ Publication No. 13-EHC011-EF). U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://www.ncbi.nlm.nih.gov/books/NBK137702/

Kangaslampi, S., & Peltonen, K. (2022). Mechanisms of change in psychological interventions for posttraumatic stress symptoms: A systematic review with recommendations. *Current Psychology, 41*(1), 258–275. https://doi.org/10.1007/s12144-019-00478-5

Kantor, V., Knefel, M., & Lueger-Schuster, B. (2017). Perceived barriers and facilitators of mental health service utilization in adult trauma survivors: A systematic review. *Clinical Psychology Review, 52,* 52–68. https://doi.org/10.1016/j.cpr.2016.12.001

Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M., Hyland, P., Maercker, A., Ben-Exra, M., Coventry, P., Mason-Roberts, S., Bradley, A., & Hutton, P. (2019). Psychological interventions for ICD-11 complex PTSD symptoms: systematic review and meta-analysis. *Psychological Medicine, 49*(11), 1761–1775. https://doi.org/10.1017/S0033291719000436

Kazdin, A. E. (2007). Mediators and mechanisms of change in psychotherapy research. *Annual Review of Clinical Psychology, 3,* 1–27. https://doi.org/10.1146/annurev.clinpsy.3.022806.091432

Kazdin, A. E. (2009). Understanding how and why psychotherapy leads to change. *Psychotherapy Research, 19*(4–5), 418–428. https://doi.org/10.1080/10503300802448899

Kazlauskas, E. (2017). Challenges for providing health care in traumatized populations: Barriers for PTSD treatments and the need for new developments. *Global Health Action, 10*(1), Article 1322399. https://doi.org/10.1080/16549716.2017.1322399

Keefe, J. R., Kimmel, D., & Weitz, E. (2024). A meta-analysis of interpersonal and psychodynamic psychotherapies for posttraumatic stress disorder. *American Journal of Psychotherapy, 77*(3), 119–128. https://doi.org/10.1176/appi.psychotherapy.20230043

Kehle-Forbes, S. M., Meis, L. A., Spoont, M. R., & Polusny, M. A. (2016). Treatment initiation and dropout from prolonged exposure and cognitive processing therapy in a VA outpatient clinic. *Psychological Trauma: Theory, Research, Practice, and Policy, 8*(1), 107–114. https://doi.org/10.1037/tra0000065

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*(12), 1048–1060. https://doi.org/10.1001/archpsyc.1995.03950240066012

Keyan, D., Garland, N., Choi-Christou, J., Tran, J., O'Donnell, M., & Bryant, R. A. (2024). A systematic review and meta-analysis of predictors of response to trauma-focused psychotherapy for posttraumatic stress disorder. *Psychological Bulletin, 150*(7), 767–797. https://doi.org/10.1037/bul0000438

Kim, J. E., Dager, S. R., Jeong, H. S., Ma, J., Park, S., Kim, J., Choi, Y., Lee, S. L., Kang, I., Ha, E., Cho, H. B., Lee, S., Kim, E-J., Yoon, S., & Lyoo, I. K. (2018). Firefighters, posttraumatic stress disorder, and barriers to treatment: Results from a nationwide total population survey. *PLoS ONE, 13*(1), Article e0190630. https://doi.org/10.1371/journal.pone.0190630

Kiselev, N., Morina, N., Schick, M., Watzke, B., Schnyder, U., & Pfaltz, M. C. (2020). Barriers to access to outpatient mental health care for refugees and asylum seekers in Switzerland: the therapists' view. *BMC Psychiatry, 20*, Article 378. https://doi.org/10.1186/s12888-020-02783-x

Kleim, B., Grey, N., Wild, J., Nussbeck, F. W., Stott, R., Hackmann, A., Clark, D. M., & Ehlers, A. (2013). Cognitive change predicts symptom reduction with cognitive therapy for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 81*(3), 383–393. https://doi.org/10.1523/jneurosci.3048-13.2013

Kleindienst, N., Steil, R., Priebe, K., Müller-Engelmann, M., Biermann, M., Fydrich, T., Schmahl, C., & Bohus, M. (2021). Treating adults with a dual diagnosis of borderline personality disorder and posttraumatic stress disorder related to childhood abuse: Results from a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 89*(11), 925–936. https://doi.org/10.1037/ccp0000687

Kline, A. C., Feeny, N. C., & Zoellner, L. A. (2020). Race and cultural factors in an RCT of prolonged exposure and sertraline for PTSD. *Behaviour Research and Therapy, 132,* Article 103690. https://doi.org/10.1016/j.brat.2020.103690

Koenen, K. C., Ratanatharathorn, A., Ng, L., McLaughlin, K. A., Bromet, E. J., Stein, D. J., Karam, E. G., Meron Ruscio, A., Benjet, C., Scott, K., Atwoli, L., Petukhova, M., Lim, C. C. W., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Bunting, B., Ciutan, M., de Girolamo, G.,...Kessler, R. C. (2017). Posttraumatic stress disorder in the World Mental Health Surveys. *Psychological Medicine, 47*(13). 2260–2274. https://doi.org/10.1017/S0033291717000708

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kuckertz, J. E., Amir, N., Boffa, J. W., Warren, C. K., Rindt, S. E., Norman, S., Ram, V., Ziajko, L., Webb-Murphy, J., & McLay, R. (2014). The effectiveness of an attention bias modification program as an adjunctive treatment for post-traumatic stress disorder. *Behaviour Research and Therapy, 63,* 24–35. https://doi.org/10.1016/j.brat.2014.09.002

Kudler, H. S., Krupnick, J. L., Blank, A. S., Jr., Herman, J. L., & Horowitz, M. J. (2009). Psychodynamic therapy for adults. In E. B. Foa, T. M. Keane, M. J. Friedman, & J. A. Cohen (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (2nd ed., pp. 346–369). The Guilford Press.

Lampe, A., Barbist, M.-T., Gast, U., Reddemann, L., & Schüßler, G. (2014). Long-term course in female survivors of childhood abuse after psychodynamically oriented, trauma-specific inpatient treatment: A naturalistic two-year follow-up. *Zeitschrift für Psychosomatische Medizin und Psychotherpie, 60,* 267–282. https://doi.org/10.13109/zptm.2014.60.3.267

Larsen, S. E. (n.d.). *Complex PTSD: History and definitions.* U.S. Department of Veterans Affairs. https://www.ptsd.va.gov/professional/treat/essentials/complex_ptsd.asp

Larsen, S. E., Wiltsey Stirman, S., Smith, B. N., & Resick, P. A. (2016). Symptom exacerbations in trauma-focused treatments: Associations with treatment outcome and non-completion. *Behaviour Research and Therapy, 77,* 68–77. https://doi.org/10.1016/j.brat.2015.12.009

Lee, C. W., & Cuijpers, P. (2013). A meta-analysis of the contribution of eye movements in processing emotional memories. *Journal of Behavior Therapy and Experimental Psychiatry, 44*(2), 231–239. https://doi.org/10.1016/j.jbtep.2012.11.001

Lekas, H.-M., Pahl, K., & Lewis, C. F. (2020). Rethinking cultural competence: Shifting to cultural humility [Editorial]. *Health Services Insights, 13.* https://doi.org/10.1177/1178632920970580

Lilienfeld, S. O. (2011). Distinguishing scientific from pseudoscientific psychotherapies: Evaluation the role of theoretical plausibility, with a little help from Reverend Bayes. *Clinical Psychology: Science and Practice, 18*(2), 105–112. https://doi.org/10.1111/j.1468-2850.2011.01241.x

Lindauer, R. J. L., Gersons, B. P. R., van Meijel, E. P. M., Blom, K., Carlier, I. V. E., Vrijlandt, I., & Olff, M. (2005). Effects of brief eclectic psychotherapy in patients with posttraumatic stress disorder: Randomized clinical trial. *Journal of Traumatic Stress, 18*(3), 205—212. https://doi.org/10.1002/jts.20029

Livingston, N. A., Berke, D., Scholl, J., Ruben, M., & Shipherd, J. C. (2020). Addressing diversity in PTSD treatment: Clinical considerations and guidance for the treatment of PTSD in LGBTQ populations. *Current Treatment Options in Psychiatry, 7,* 53–69. https://doi.org/10.1007/s40501-020-00204-0

LoSavio, S. T., Holder, N., Wells, S. Y. & Resick, P. A. (2022). Clinician concerns about Cognitive Processing Therapy: A review of the evidence. *Cognitive and Behavioral Practice.* Advance online publication. https://doi.org/10.1016/j.cbpra.2022.08.005

Lowe, S. M. (2024). *Yellow peril 2.0: A feminist multicultural psychologists' praxis resisting intersectional racism, sexism and economic exploitation of Asian Americans & Pacific Islanders* [Unpublished manuscript]. Honolulu, Hawaii, United States.

Lykos Therapeutics. (2024, August 9). *Lykos Therapeutics announces complete response letter for midomafetamine capsules for PTSD* [Press release]. https://news.lykospbc.com/2024-08-09-Lykos-Therapeutics-Announces-Complete-Response-Letter-for-Midomafetamine-Capsules-for-PTSD

Lynn, S. J., Aksen, D., Sleight, F., Polizzi, C., Moretti, L. S., & Medrano, L. A. (2023). Combating pseudoscience in clinical psychology: From the scientific mindset, to busting myths, to prescriptive remedies. In C. L. Cobb, S. J. Lynn, & W. O'Donohue (Eds.)., *Toward a science of clinical psychology* (pp. 123–141). Springer. https://doi.org/10.1007/978-3-031-14332-8_7

Lynn, S. J., Malakataris, A., Condon, L., Maxwell, R., & Cleere, C. (2012). Post-traumatic stress disorder: Cognitive hypnotherapy, mindfulness, and acceptance-based treatment approaches. *American Journal of Clinical Hypnosis, 54*(5), 311–330. https://doi.org/10.1080/00029157.2011.645913

Maguen, S., Madden, E., Neylan, T. C., Cohen, B. E., Bertenthal, D., & Seal, K. H. (2014). Timing of mental health treatment and PTSD symptom improvement among Iraq and Afghanistan Veterans. *Psychiatric Services, 65*(12), 1414–1419. https://doi.org/10.1176/appi.ps.201300453

Marsella, A. J. (2010). Ethnocultural aspects of PTSD: An overview of concepts, issues, and treatments. *Traumatology, 16*(4), 17–26. https://doi.org/10.1177/1534765610388062

Marx, B. P., Thompson-Hollands, J., Lee, D. J., Resick, P. A., & Sloan, D. M. (2021). Estimated intelligence moderates cognitive processing therapy outcome for posttraumatic stress symptoms. *Behavior Therapy, 52*(1), 162–169. https://doi.org/10.1016/j.beth.2020.03.008

Mattar, S. (2011). Educating and training the next generations of traumatologists: Development of cultural competencies. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*(3), 258–265. https://doi.org/10.1037/a0024477

Mellers, B., Hertwig, R., & Kahneman, D. (2001). Do frequency representations eliminate conjunction effects? An exercise in adversarial collaboration. *Psychological Science, 12*(4), 269–275. https://doi.org/10.1111/1467-9280.00350

Merians, A. N., Spiller, T., Harpaz-Rotem, I., Krystal, J. H., & Pietrzak, R. H. (2023). Post-traumatic stress disorder. *Medical Clinics of North America, 107*(1), 85–99. https://doi.org/10.1016/j.mcna.2022.04.003

The Metapsy Collaboration. (2024). *Meta-analytic database of psychotherapy trials* [Database]. Vrije Universiteit Amsterdam, The Netherlands. https://www.metapsy.org/

Mezzina, R., Gopikumar, V., Jenkins, J., Saraceno, B., & Sashidharan, S. P. (2022). Social vulnerability and mental health inequalities in the "syndemic": Call for action. *Frontiers in Psychiatry, 13,* Article 894370. https://doi.org/10.3389/fpsyt.2022.894370

Miklović, A., Polinder, S., Retel Helrich, I. R. A., Haagsma, J. A., & Cnossen, M. C. (2019). Treatment for posttraumatic stress disorder in patients with a history of traumatic brain injury: A systematic review. *Clinical Psychology Review, 73*, Article 101776. https://doi.org/10.1016/j.cpr.2019.101776

Mithoefer, M. C., Mithoefer, A. T., Feduccia, A. A., Jerome, L., Wagner, M., Wymer, J., Holland, J., Hamilton, S., Yazar-Klosinski, B., Emerson, A., & Doblin, R. (2018). 3,4-methylenedioxymethamphetamine (MDMA)-assisted psychotherapy for post-traumatic stress disorder in military veterans, firefighters, and police officers: a randomised, double-blind, dose-response, phase 2 clinical trial. *Lancet Psychiatry, 5*(6), 486–497. https://doi.org/10.1016/S2215-0366(18)30135-4

Mithoefer, M. C., Wagner, M. T., Mithoefer, A. T., Jerome, L., & Doblin, R. (2010). The safety and efficacy of ±3,4-methylenedioxymethamphetamine-assisted psychotherapy in subjects with chronic, treatment-resistant posttraumatic stress disorder: the first randomised controlled pilot study. *Journal of Psychopharmacology, 25*(4), 439–452. https://doi.org/10.1177/0269881110381185

Morath, J., Gola, H., Sommershof, A., Hamuni, G., Kolassa, S., Catani, C., Adenauer, H., Ruf-Leuschner, M., Schauer, M., Elbert, T., Groettrup, M., & Kolassa, I.-T. (2014). The effect of trauma-focused therapy on the altered T cell distribution in individuals with PTSD: Evidence from a randomized controlled trial. *Journal of Psychiatric Research, 54,* 1–10. https://doi.org/10.1016/j.jpsychires.2014.03.016

Morina, N., Malek, M., Nickerson, A., & Bryant, R. A. (2017). Meta-analysis of interventions for post-traumatic stress disorder and depression in adult survivors of mass violence in low- and middle-income countries. *Depression and Anxiety, 34*(8), 679–691. http://dx.doi.org/10.1002/da.22618

Morina, N., Akhtar, A., Barth, J., & Schnyder, U. (2018). Psychiatric disorders in refugees and internally displaced persons after forced displacement: A systematic review. *Frontiers in Psychiatry, 9,* Article 433. https://doi.org/10.3389/fpsyg.2018.02211

Moye, J., & Rouse, S. J. (2014). Posttraumatic stress in older adults: When medical diagnoses or treatments cause traumatic stress. *Clinics in Geriatric Medicine, 30*(3), 577–589. https://www.geriatric.theclinics.com/article/S0749-0690(14)00041-X/abstract

Mustafa, R. A., McQueen, B., Nikitin, D., Nhan, E., Zemplenyi, A., DiStefano, M. J., Kayali, Y., Richardson, M., & Rind, D. M. (2024). *3,4-Methylenedioxymethamphetamine assisted psychotherapy for post-traumatic stress disorder: Effectiveness and value; Final Evidence Report.* Institute for Clinical and Economic Review. https://icer.org/assessment/ptsd-2024/#overview

McLaughlin, K. A., Sheridan, M. A., & Lambert, H. K. (2014). Childhood adversity and neural development: Deprivation and threat as distinct dimensions of early experience. *Neuroscience and Biobehavioral Reviews, 47,* 578–591. https://doi.org/10.1016/j.neubiorev.2014.10.012

McClendon, J., Dean, K. E., & Galovski, T. (2020). Addressing diversity in PTSD treatment: Disparities in treatment engagement and outcome among patients of color. *Current Treatment Options in Psychiatry, 7,* 275–290. https://doi.org/10.1007/s40501-020-00212-0

McGuinness, A. G. (2024). *Integrative and holistic approaches to treating PTSD: Two theoretical models to guide best practice.* Digital Commons @ Manchester. https://digitalcommons.macalester.edu/psychology_honors/58

McHugh, R. L., Whitton, S. W., Peckham, A. D., Welge, J. A., & Otto, M. W. (2013). Patient preference for psychological vs pharmacologic treatment of psychiatric disorders: A meta-analytic review. *The Journal of Clinical Psychiatry, 74*(6), 595–602. https://doi.org/10.4088%2FJCP.12r07757

McLay, R., Fesperman, S., Webb-Murphy, J., Delaney, E., Ram, V., Nebeker, B., & Burce, C. M. (2023). Post-traumatic stress disorder treatment outcomes in military clinics. *Military Medicine, 188*(5–6), e1117–e1124. https://doi.org/10.1093/milmed/usab454

McLean, C. P., Su, Y.-J., & Foa, E. B. (2015). Mechanisms of symptom reduction in a combined treatment for comorbid posttraumatic stress disorder and alcohol dependence. *Journal of Consulting and Clinical Psychology, 83*(3), 655–661. https://doi.org/10.1037/ccp0000024

McLean, C. P., Zang, Y., Gallagher, T., Suzuki, N., Yarvis, J. S., Litz, B. T., Mintz, J., Young-McCaughan, S., Peterson, A. L., Foa, E. B., for the STRONG STAR Consortium. (2019). Trauma-related cognitions and cognitive emotion regulation as mediators of PTSD change among treatment-seeking active-duty military personnel with PTSD. *Behavior Therapy, 50*(6), 1053–1062. https://doi.org/10.1016/j.beth.2019.03.006

Nacasch, N., Foa, E. B., Huppert, J. D., Tzur, D., Fostick, L., Dinstein, Y., & Zohar, J. (2015). Prolonged exposure therapy for combat- and terror-related posttraumatic stress disorder: A randomized control comparison with treatment as usual. *Journal of Clinical Psychiatry, 76*(8), e1000–e1005. https://doi.org/10.4088/JCP.14m09002

National Alliance of Trauma Recovery Centers. (n.d.). *Homepage.* https://nationalallianceoftraumarecoverycenters.org/

National Center for PTSD, U.S. Department of Veterans Affairs. (2023). *Database of PTSD trials comparing psychological interventions with control conditions: Part of the Metapsy project* (Version 23.0.3) [Data set and code book]. The Metapsy Collaboration. https://zenodo.org/doi/10.5281/zenodo.10027042

National Center for Complementary and Integrative Health. (2021). *Complementary, alternative, or integrative health: What's in a name?* U.S. Department of Health and Human Services, National Institutes of Health. https://www.nccih.nih.gov/health/complementary-alternative-or-integrative-health-whats-in-a-name

The National Child and Traumatic Stress Network. (n.d.). *Homepage.* U.S. Department of Health and Human Services, Substance Abuse Mental Health Services Administration, Center for Mental Health Services. https://www.nctsn.org/

National Institute for Health and Care Excellence. (2018). *Post-traumatic stress disorder.* https://www.nice.org.uk/guidance/ng116

Neuner, F., Schauer, M., Klaschik, C., Karunakara, U., & Elbert, T. (2004). A comparison of narrative exposure therapy, supportive counseling, and psychoeducation for treating posttraumatic stress disorder in an African refugee settlement. *Journal of Consulting and Clinical Psychology, 72*(4), 579–587. https://doi.org/10.1037/0022-006X.72.4.579

Neuner, F., Onyut, P. L., Ertl, V., Odenwald, M., Schauer, E., & Elbert, T. (2008). Treatment of posttraumatic stress disorder by trained lay counselors in an African refugee settlement: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 76*(4), 686–694. https://doi.org/10.1037/0022-006X.76.4.686

Nobles, C. J., Valentine, S. E., Zepeda, E. D., Ahles, E. M., Shtasel, D. L., & Marques, L. (2017). Usual course of treatment and predictors of treatment utilization for patients with posttraumatic stress disorder. *The Journal of Clinical Psychiatry, 78*(5), Article 22029. https://www.psychiatrist.com/jcp/usual-course-of-treatment-and-predictors-of-treatment-utilization-for-ptsd/

Norcross, J. C., & Lambert, M. J. (2018). Psychotherapy relationships that work III. *Psychotherapy, 55*(4), 303–315. https://doi.org/10.1037/pst0000193

Nuttman-Shwartz, O., & Shoval-Zuckerman, Y. (2015). Continuous traumatic situations in the face of ongoing political violence: The relationship between CTS and PTSD. *Trauma, Violence, & Abuse, 17*(5), 562–570. https://doi.org/10.1177/1524838015585316

Oehen, P., Traber, R., Widmer, V., & Schnyder, U. (2013). A randomized, controlled pilot study of MDMA (±3,4-Methylenedioxymethamphetamine)-assisted psychotherapy for treatment of resistant, chronic post-traumatic stress disorder (PTSD). *Journal of Psychopharmacology, 27*(1), 40–52. https://doi.org/10.1177/0269881112464827

Oleski, J., Mota, N., Cox, B. J. & Sareen, J. (2010). Perceived need for care, help seeking, and perceived barriers to care for alcohol use disorders in a national sample. *Psychiatric Services, 61*(12), 1223–1231. https://ps.psychiatryonline.org/doi/full/10.1176/ps.2010.61.12.1223

Olfson, M., King, M., & Schoenbaum, M. (2015). Benzodiazepine use in the United States. *JAMA Psychiatry, 72*(2), 136–142. https://doi.org/10.1001/jamapsychiatry.2014.1763

O'Neil, M. E., Cheney, T. P., Yu, Y., Hart, E. L., Holmes, R. S., Blazina, I., Clauss, K., Veazie, S. P., Griffin, J. C., Jungbauer, R., Zaccari, B., Fu, R., Carlson, K. F., & Chou, R. (2023). *Pharmacologic and nonpharmacologic treatments for posttraumatic stress disorder: 2023 update of the evidence base for the PTSD trials standardized data repository* (AHRQ Publication No. 23-EHC028). U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://doi.org/10.23970/AHRQEPCPTSD2023

Öst, L.-G., Enebrink, P., Finnes, A., Ghaderi, A., Havnen, A., Kvale, G., Salomonsson, S., & Wergeland, G. J. (2023). Cognitive behavior therapy for adult post-traumatic stress disorder in routine clinical care: A systematic review and meta-analysis. *Behaviour Research and Therapy,* 166, Article 104323. https://doi.org/10.1016/j.brat.2023.104323

Ouimette, P., Vogt, D., Wade, M., Tirone, V., Greenbaum, M. A., Kimerling, R., Laffaye, C., Fitt, J. E., & Rosen, C. S. (2011). Perceived barriers to care among veterans health administration patients with posttraumatic stress disorder. *Psychological Services, 8*(3), 212–223. https://doi.org/10.1037/a0024360

Ot'alora G, M., Grigsby, J., Poulter, B., Van Derveer, J. W. V., III., Giron, S. G., Jerome, L., Feduccia, A. A., Hamilton, S., Yazar-Klosinski, B., Emerson, A., Mithoefer, M. C., & Doblin, R. (2018). 3,4-Methylenedioxymethamphetamine-assisted psychotherapy for treatment of chronic posttraumatic stress disorder: A randomized phase 2 controlled trial. *Journal of Psychopharmacology, 32*(12), 1295–1307. https://doi.org/10.1177/0269881118806297

Page, M. E. (2003). The promises and pitfalls of reboxetine. *CNS Drug Reviews, 9*(4), 327–342. https://doi.org/10.1111/j.1527-3458.2003.tb00258.x

Patel, A. R., & Hall, B. J. (2021). Beyond the DSM-5 diagnoses: A cross-cultural approach to assessing trauma reactions. *Focus, 19*(2), 197–203. https://doi.org/10.1176/appi.focus.20200049

Patel, V., Minas, H., Cohen, A., & Prince, M. J. (2011). *Global mental health: Principles and practice.* Oxford University Press.

Pearson, C. R., Kaysen, D., Huh, D., & Bedard-Gilligan, M. (2019). Randomized control trial of culturally adapted cognitive processing therapy for PTSD substance misuse and HIV sexual risk behavior for Native American women. *AIDS and Behavior, 23*, 695–706. https://doi.org/10.1007/s10461-018-02382-8

Phelps, A. J., Lethbridge, R., Brennan, S., Bryant, R. A., Burns, P., Cooper, J. A., Forbes, D., Gardiner, J., Gee, G., Jones, K., Kenardy, J., Kulkarni, J., McDermott, B., McFarlane, A. C., Newman, L., Varker, T., Worth, C., & Silove, D. (2022). Australian guidelines for the prevention and treatment of posttraumatic stress disorder: Updates in the third edition. *Australian & New Zealand Journal of Psychiatry, 56*(3), 230–247. https://doi.org/10.1177/00048674211041917

Phoenix Australia, Centre for Posttraumatic Mental Health. (2020). *Australian guidelines for the prevention and treatment of acute stress disorder, posttraumatic stress disorder, and complex PTSD.* University of Melbourne. https://www.phoenixaustralia.org/australian-guidelines-for-ptsd/

Pole, N., Ablon, J. S., & O'Connor, L. E. (2008). Using psychodynamic, cognitive behavioral, and control mastery prototypes to predict change: A new look at an old paradigm for long-term single-case research. *Journal of Counseling Psychology, 55*(2), 221-232. https://doi.org/10.1037/0022-0167.55.2.221

Pringle, A., Browning, M., Cowen, P. J., & Harmer, C. J. (2011). A cognitive neuropsychological model of antidepressant drug action. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 35*(7), 1586–1592. https://doi.org/10.1016/j.pnpbp.2010.07.022

Qureshi, A., & Collazos, F. (2011). The intercultural and interracial therapeutic relationship: Challenges and recommendations. *International Review of Psychiatry, 23*(1), 10–19. https://doi.org/10.3109/09540261.2010.544643

Ranjbar, N., Erb, M., Mohammad, O., & Moreno, F. A. (2020). Trauma-informed care and cultural humility in the mental health care of people from minoritized communities. *Focus, 18*(1), 8–15. https://doi.org/10.1176/appi.focus.20190027

Rauch, S. A. M., Kim, H. M., Venners, M. R., Porter, K. E., Norman, S. B., Simon, N. M., Rothbaum, B. O., Tuerk, P. W., Acierno, R. E., Bui, E., Powell, C., Smith, E. R., Goetter, E., & McSweeney, L. B. (2022). Change in posttraumatic stress disorder-related thoughts during treatment: Do thoughts drive change when pills are involved? *Journal of Traumatic Stress, 35*(2), 496–507. https://doi.org/10.1002/jts.22762

Rauch, S. A. M., King, A. P., Abelson, J. L., Tuerk, P. W., Smith, E., Rothbaum, B. O., & Liberzon, I. (2015). Biological and symptom changes in posttraumatic stress disorder treatment: A randomized clinical trial. *Depression and Anxiety, 32*(3), 204–212. https://doi.org/10.1002/da.22331

Rauvola, R. S., Vega, D. M., & Lavigne, K. N. (2019). Compassion fatigue, secondary traumatic stress, and vicarious traumatization: a qualitative review and research agenda. *Occupational Health Science, 3,* 297–336. https://doi.org/10.1007/s41542-019-00045-1

Roberts, N. P., Lotzin, A., & Schäfer, I. (2022). A systematic review and meta-analysis of psychological interventions for comorbid post-traumatic stress disorder and substance use disorder. *European Journal of Psychotraumatology, 13*(1), Article 2041831. https://doi.org/10.1080/20008198.2022.2041831

Roberts, C., Sahakian, B. J., & Robbins, T. W. (2020). Psychological mechanisms and functions of 5-HT and SSRIs in potential therapeutic change: Lessons from the serotonergic modulation of action selection, learning, affect, and social cognition. *Neuroscience & Biobehavioral Reviews, 119,* 138–167. https://doi.org/10.1016/j.neubiorev.2020.09.001

Røssberg, J. I., Evensen, J., Dammen, T., Wilberg, T., Klungsøyr, O., Jones, M., Bøen, E., Egeland, R., Breivik, R., Løvgren, A., & Ulberg, R. (2021). Mechanisms of change and heterogeneous treatment effects in psychodynamic and cognitive behavioural therapy for patients with depressive disorder: a randomized controlled trial. *BMC Psychology, 9,* Article 11. https://doi.org/10.1186/s40359-021-00517-6

Rubenstein, A., Duek, O., Doran, J., & Harpaz-Rotem, I. (2024). To expose or not to expose: A comprehensive perspective on treatment for posttraumatic stress disorder. *American Psychologist, 79*(3), 331–343. https://doi.org/10.1037/amp0001121

Samson, D., & Schoelles, K. M. (2012). Chapter 2: Developing the topic and structuring systematic reviews of medical tests: Utility of PICOTS, analytic frameworks, decision trees, and other frameworks. In S. M. Chang, D. B. Matchar, G. W. Smetana, & C. A. Umscheid (Eds.) *Methods guide for medical test reviews (AHRQ Publication No. 12-EHC017).* U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/methods-guidance-tests-topics_methods.pdf

Sanders, A. A., Roberts, J. D., McDowell, M. C., Jr., & Muller, A. (2024). The consequences of misdiagnosis race-based trauma response in Black men: A critical examination. *Social Work in Public Health.* Advance online publication. https://doi.org/10.1080/19371918.2024.2380821

Sarmanlu, M., Kuypers, K. P. C., Vizeli, P., & Kvamme, T. L. (2024). MDMA-assisted psychotherapy for PTSD: Growing evidence for memory effects mediating treatment efficacy. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 128,* Article 110843. https://doi.org/10.1016/j.pnpbp.2023.110843

Satinsky, E., Fuhr, D. C., Woodward, A., Sondorp, E., & Roberts, B. (2019). Mental health care utilisation and access among refugees and asylum seekers in Europe: A systematic review. *Health Policy 123*(9), 851–863. https://doi.org/10.1016/j.healthpol.2019.02.007

Sautter, F. J., Glynn, S. M., Becker-Cretu, J. J., Senturk, D., Armelie, A. P., & Wielt, D. B. (2016). Structured approach therapy for combat-related PTSD in returning U.S. veterans: Complementary mediation by changes in emotion functioning. *Journal of Traumatic Stress, 29*(4), 384–387. https://doi.org/10.1002/jts.22120

Sayer, N. A., Friedemann-Sanchez, G., Spoont, M., Murdoch, M., Parker, L. E., Chiros, C., & Rosenheck, R. (2009). A qualitative study of determinants of PTSD treatment initiation in Veterans. *Psychiatry: Interpersonal and Biological Processes, 72*(3), 238–255. https://doi.org/10.1521/psyc.2009.72.3.238

Serpeloni, F., Narrog, J. A., de Assis, S. G., Avanci, J. Q., Carleial, S., & Koebach, A. (2021). Narrative exposure therapy versus treatment as usual in a sample of trauma survivors who live under ongoing threat of violence in Rio de Janeiro, Brazil: study protocol for a randomised controlled trial. *Trials, 22,* Article 165. https://doi.org/10.1186/s13063-021-05082-2

Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures.* Guilford Press.

Short, N. A., Boffa, J. W., Norr, A. M., Albanese, B. J., Allan, N. P., & Schmidt, N. B. (2017). Randomized clinical trial investigating the effects of an anxiety sensitivity intervention on posttraumatic stress symptoms: A replication and extension. *Journal of Traumatic Stress, 30*(3), 296–303. https://doi.org/10.1002/jts.22194

Schottenbauer, M. A., Glass, C. R., Arnkoff, D. B., & Gray, S. H. (2008). Contributions of psychodynamic approaches to treatment of PTSD and trauma: A review of the empirical treatment and psychopathology literature. *Psychiatry: Interpersonal and Biological Processes, 71*(1), 13–34. https://doi.org/10.1521/psyc.2008.71.1.13

Schumm, J. A., Dickstein, B. D., Walter, K. H., Owens, G. P., & Chard, K. M. (2015). Changes in posttraumatic cognitions predict changes in posttraumatic stress disorder symptoms during cognitive processing therapy. *Journal of Consulting and Clinical Psychology, 83*(6), 1161–1166. https://doi.org/10.1037/ccp0000040

Schünemann, H. J., Osborne, M., Moss, J., Manthous, C., Wagner, G., Sicilian, L., Ohar, J., McDermott, S., Lucus, L., & Jaeschke, R. (2009). An official American Thoracic Society policy statement: Managing conflict of interest in professional societies. *American Journal of Respiratory and Critical Care Medicine, 180*(6), 564–580. https://doi.org/10.1164/rccm.200901-0126ST

Schünemann, H., Brożek, J., Guyatt, G., & Oxman, A. (Eds.). (2013). *GRADE handbook.* https://gdt.gradepro.org/app/handbook/handbook.html

Schnurr, P. P., & Lunney, C. A. (2016). Symptom benchmarks of improved quality of life in PTSD. *Depression and Anxiety, 33*(3), 247–255. https://doi.org/10.1002/da.22477

Schnurr, P. P., Friedman, M. J., Engel, C. C., Foa, E. B., Shea, M. T., Chow, B. K., Resick, P. A., Thurston, V., Orsillo, S. M., Haug, R., Turner, C., & Bernardy, N. (2007). Cognitive behavioral therapy for posttraumatic stress disorder in women: a randomized controlled trial. *JAMA, 297*(8), 820–830. https://jamanetwork.com/journals/jama/article-abstract/205769

Schnyder, U., Ehlers, A., Elbert, T., Foa, E. B., Gersons, B. P. R., Resick, P. A., Shapiro, F., & Cloitre, M. (2015). Psychotherapies for PTSD: What do they have in common? *European Journal of Psychotraumatology, 6,* Article 28186. https://doi.org/10.3402/ejpt.v6.28186

Shea, B. J., Reeves, B. C., Wells, G., Thuku, M., Hamel, C., Moran, J., Moher, D., Tugwell, P., Welch, V., Kristjansson, E., & Henry, D. A. (2017). AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ, 358,* Article j4008. https://doi.org/10.1136/bmj.j4008

Sijercic, I., Liebman, R. E., Ip, J., Whitfield, K. M., Ennis, N., Sumantry, D., Sippel, L. M., Fredman, S. J., & Monson, C. M. (2022). A systematic review and meta-analysis of individual and couple therapies for posttraumatic stress disorder: Clinical and intimate relationship outcomes. *Journal of Anxiety Disorders, 91,* Article 102613. https://doi.org/10.1016/j.janxdis.2022.102613

Sikkema, K. J., Ranby, K. W., Meade, C. S., Hansen, N. B., Wilson, P., & Kochman, A. (2013). Reductions in traumatic stress following a coping intervention were mediated by decreases in avoidant coping for people living with HIV/AIDS and childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 81*(2), 274–283. https://doi.org/10.1037/a0030144

Simon, N., Roberts, N. P., Lewis, C. E., van Gelderen, M. J., & Bisson, J. I. (2019). Associations between perceived social support, posttraumatic stress disorder (PTSD) and complex PTSD (CPTSD): implications for treatment. *European Journal of Psychotraumatology, 10*(1), Article 1573129. https://doi.org/10.1080/20008198.2019.1573129

Singla, D. R. (2021). Award for distinguished scientific early career contributions to psychology: Daisy R. Singla. *American Psychologist, 76*(9), 1454–1456. https://doi.org/10.1037/amp0000950

Slewa-Younan, S., Guajardo, M. G. U., Yaser, A., Mond, J., Smith, M., Milosevic, D., Smith, C., Lujic, S., & Jorm, A. F. (2017). Causes of and risk factors for posttraumatic stress disorder: The beliefs of Iraqi and Afghan refugees resettled in Australia. *International Journal of Mental Health Systems, 11,* Article 4. https://doi.org/10.1186/s13033-016-0109-z

Smith, T. B., Rodríguez, M. D., & Bernal, G. (2011). Culture. *Journal of Clinical Psychology, 67*(2), 166–175. https://doi.org/10.1002/jclp.20757

Song, J., Garcia, H. A., Finley, E. P., & Stirman, S. W. (2023). Provider decisions to use evidence-based psychotherapy for PTSD among veterans: Assessments of overidentification with the sick role and comorbid personality disorders. *Traumatology.* Advance online publication. https://doi.org/10.1037/trm0000433

Speers, A. J. H., Bhullar, N., Cosh, S. & Wootton, B. M. (2022). Correlates of therapist drift in psychological practice: A systematic review of therapist characteristics. *Clinical Psychology Review, 93,* Article 102132. https://doi.org/10.1016/j.cpr.2022.102132

Spoont, M., Nelson, D., van Ryn, M., & Alegria, M. (2017). Racial and ethnic variation in perceptions of VA mental health providers are associated with treatment retention among Veterans with PTSD. *Medical Care, 55*(9, Suppl 2), S33–S42. https://www.jstor.org/stable/26418451

Sripada, R. K., Rauch, S. A. M., Tuerk, P. W., Smith, E., & Defever, A. M. (2016). Between-session and within-session habituation in Prolonged Exposure Therapy for posttraumatic stress disorder: A hierarchical linear modeling approach. *Journal of Anxiety Disorders, 40,* 1–8. https://doi.org/10.1016/j.cpr.2023.102300

Stein, M. B., & Norman, S. B. (2019). When does meta-analysis of a network not work? Fishing for answers [Editorial]. *JAMA Psychiatry, 76*(9), 885–886. https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2735125

Tedesco, S., Gajaram, G., Chida, S., Ahmad, A., Pentak, M., Kelada, M., Lewis, L., Krishnan, D., Tran, C., Soetan, O. T., Mukona, L. T., & Jolayemi, A. (2021). The efficacy of MDMA (3,4-Methylenedioxymethamphetamine) for post-traumatic stress disorder in humans: A systematic review and meta-analysis. *Cureus, 13*(5), Article e15070. https://doi.org/10.7759%2Fcureus.15070

Tervalon, M., & Murray-García, J. (1998). Cultural humility versus cultural competence: A critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care for the Poor and Underserved, 9*(2), 117–125. https://doi.org/10.1353/hpu.2010.0233

Thornicroft, G., Chatterji, S., Evans-Lacko, S., Gruber, M., Sampson, N., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Andrade, L., Borges, G., Bruffaerts, R., Bunting, B., de Almeida, J. M. C., Florescu, S., de Girolamo, G., Gureje, O., Haro, J. M., He, Y., Hinkov, H.,...Kessler, R. C. (2017). Undertreatment of people with major depressive disorder in 21 countries. *The British Journal of Psychiatry, 210*(2), 119–124. https://doi.org/10.1192/bjp.bp.116.188078

Tillman, G. D., Morris, E. E., Rawlinson, T., Bass, C., Turner, M., Watson, K., Didehbani, N., Kozel, F. A., Kraut, M. A., Motes, M. A., & Hart, J., Jr. (2023). Intelligence quotient, combat experiences, psychosocial functioning, and depressive symptoms' roles in PTSD symptom severity and treatment completion. *Journal of Behavioral and Cognitive Therapy, 33*(3), 139–151. https://doi.org/10.1016/j.jbct.2023.07.001

Treweek, S., Oxman, A. D., Alderson, P., Bossuyt, P. M., Brandt, L., Brożek, J., Davoli, M., Flottorp, S., Harbour, R., Hill, S., Liberati, A., Liira, H., Schünemann, H. J., Rosenbaum, S., Thornton, J., Vandvik, P. O., Alonso-Coello, P., & DECIDE Consortium. (2013). Developing and evaluating communication strategies to support informed decisions and practice based on evidence (DECIDE): protocol and preliminary results. *Implementation Science, 8,* Article 6. https://doi.org/10.1186/1748-5908-8-6

Tsai, J., Shen, J., Southwick, S. M., Greenberg, S., Pluta, A., & Pietrzak, R. H. (2018). Public attitudes and literacy about posttraumatic stress disorder in U.S. adults. *Journal of Anxiety Disorders, 55,* 63–69. *https://doi.org/10.1016/j.janxdis.2018.02.002*

UK EQUATOR Centre. (n.d.). *EQUATOR network: Enhancing the QUALity and Transparency Of health Research.* https://www.equator-network.org/

U.S. Department of Veterans Affairs, Department of Defense. (2023). *VA/DoD Clinical practice guideline for management of posttraumatic stress disorder and acute stress disorder* (Version 4.0). https://www.healthquality.va.gov/guidelines/MH/ptsd/index.asp

van de Kamp, M. M., Scheffers, M., Emck, C., Fokker, T. J., Hatzmann, J., Cuijpers, P., & Beek, P. J. (2023). Body- and movement-oriented interventions for posttraumatic stress disorder: An updated systematic review and meta-analysis. *Journal of Traumatic Stress, 36*, 835–848. https://doi.org/10.1002/jts.22968

Volker, T., Koemeda-Lutz, M. von Wyl, A., Crameri, A., & Schulthess, P. (2020). The impact of patients' and therapists' views of the therapeutic alliance on treatment outcome in psychotherapy. *The Journal of Nervous and Mental Disease, 208*(1), 56–64. https://journals.lww.com/jonmd/toc/2020/01000

Von der Warth, R., Dams, J. Grochtdreis, T. & König, H. (2020). Economic evaluations and cost analyses in posttraumatic stress disorder: A systematic review. *European Journal of Psychotraumatology, 11*(1), Article 1753940. https://doi.org/10.1080/20008198.2020.1753940

Wang, P. S., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., Borges, G., Bromet, E. J., Bruffaerts, R., de Girolamo, G., de Graaf, R., Gureje, O., Haro, J. M., Karam, E. G., Kessler, R. C., Kovess, V., Lane, M. C., Lee, S., Levinson, D., Ono, Y., Petukhova,...Wells, J. E. (2007). Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. *The Lancet,* 37(9590), 841–850. https://doi.org/10.1016/S0140-6736(07)61414-7

Weathers, F. W., Blake, D. D., Schnurr, P. P., Kaloupek, D. G., Marx, B. P., & Keane, T. M. (2013). *The Life Events Checklist for DSM-5 (LEC-5).* Instrument available from the National Center for PTSD at www.ptsd.va.gov

Whaley, A. L., & Davis, K. E. (2007). Cultural competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist, 62*(6), 563–574. https://doi.org/10.1037/0003-066X.62.6.563

Wisco, B. E., Sloan, D. M., Marx, B. P., & Keane, T. M. (2016). The role of emotional engagement and heart rate acceleration in response to trauma-related stimuli. *Journal of Traumatic Stress, 29*(5), 450–457. https://doi.org/10.1002/jts.22131

Williams, M. T., Osman, M., Gran-Ruaz, S., & Lopez, J. (2021). Intersection of racism and PTSD: Assessment and treatment of racial stress and trauma. *Current Treatment Options in Psychiatry, 8*(4), 167–185. https://doi.org/10.1007/s40501-021-00250-2

Williams, T., Phillips, N. J., Stein, D. J., & Ipser, J. C. (2022). Pharmacotherapy for post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews.* https://doi.org/10.1002/14651858.CD002795.pub3

Williamson, V., Greenberg, N., & Stevelink, S. A. M. (2019). Perceived stigma and barriers to care in UK Armed Forces personnel and veterans with and without probably mental disorders. *BMC Psychology, 7,* Article 75. https://doi.org/10.1186/s40359-019-0351-7

Windle, E., Tee, H., Sabitova, A., Jovanovic, N., Priebe, S., & Carr, C. (2020). Association of patient treatment preference with dropout and clinical outcomes in adult psychosocial mental health interventions: A systematic review and meta-analysis. *JAMA Psychiatry, 77*(3), 294–302. https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2756319

World Health Organization. (2005). *Mental health atlas 2005.* https://apps.who.int/iris/bitstream/handle/10665/43375/924156296X_eng.pd

World Health Organization. (2019). *International statistical classification of diseases and related health problems* (11th ed.). https://icd.who.int/

Yakeley, J. (2014). Psychodynamic psychotherapy: developing the evidence base. *Advances in Psychiatric Treatment, 20*(4), 269–279. https://doi.org/10.1192/apt.bp.113.012054

Yamokoski, C., Barron, S., Fowler, J., Fast, E., & Flores, H. (2021). Barriers and facilitators to the implementation of intensive treatments for PTSD: Early lessons learned from the field. *Cognitive and Behavioral Practice, 30*(3), 384–396. https://doi.org/10.1016/j.cbpra.2022.04.003

Youngstrom, E. A., Prinstein, M. J., Mash, E. J., & Barkley, R. A. (2013). *Treatment of disorders in childhood and adolescence.* The Guilford Press.

Zaccari, B., Higgins, M., Haywood, T. N., Patel, M., Emerson, D., Hubbard, K., Loftis, J. M., & Kelly, U. A. (2023). Yoga vs. cognitive processing therapy for military sexual trauma-related posttraumatic stress disorder: A randomized clinical trial. *JAMA Network Open, 6*(12), Article e2344862. https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2812725

Zalta, A. K., Gillihan, S. J., Fisher, A. J., Mintz, J., McLean, C. P., Yehuda, R., & Foa, E. B. (2014). Change in negative cognitions associated with PTSD predicts symptom reduction in prolonged exposure. *Journal of Consulting and Clinical Psychology, 82*(1), 171–175. https://doi.org/10.1016/j.beth.2016.02.008

Zang, Y., Hunt, N., & Cox, T. (2013). A randomised controlled pilot study: The effectiveness of narrative exposure therapy with adult survivors of the Sichuan earthquake. *BMC Psychiatry, 13,* Article 41. https://doi.org/10.1186/1471-244X-13-41

Zemestani, M., Mohammed, A. F., Ismail, A. A., & Vujanovic, A. A. (2022). A pilot randomized clinical trial of a novel culturally adapted, trauma-focused cognitive-behavioral intervention for war-related PTSD in Iraqi Women. *Behavior Therapy, 53*(4). 656–672. https://doi.org/10.1016/j.beth.2022.01.009

Zhang, Z.-X., Liu, R.-B., Zhang, J., Xian-Yu, C.-Y., Liu, J.-L., Li, X.-Z., Zhang, Y.-Q., & Zhang, C. (2023). Clinical outcomes of recommended active pharmacotherapy agents from NICE guideline for post-traumatic stress disorder: Network meta-analysis. *Progress in Neuropsychopharmacology & Biological Psychiatry, 125,* Article 110754. https://doi.org/10.1016/j.pnpbp.2023.110754

APPENDIX A

Descriptions of Treatments

Derived from Research Included in the Systematic Reviews/Meta-Analyses

Intervention		Description of Treatment
Psychological	Brief Eclectic Psychotherapy (BEP)	Manualized treatment that combines cognitive behavior therapy techniques and psychodynamic strategies, including psychoeducation, relaxation, imaginal exposure, writing, learning from the trauma, meaning and integration, and an ending ritual.
Psychological	Cognitive Behavioral Therapy (CBT)	Utilizes behavioral and cognitive strategies, particularly exposure, cognitive restructuring, and development of coping skills, to address learned and conditioned behaviors, thoughts, and emotional and psychophysiological reactions.
Psychological	Cognitive Processing Therapy (CPT)	CPT is a specific type of cognitive behavioral therapy that focuses on the cognitions developed as a result of the trauma and the role that inaccurate or distorted cognitions have on emotional responses and on behavior. The primary goals of CPT are to encourage the expression of natural emotions and reduce manufactured emotions related to the trauma; to identify and challenge dysfunctional cognitions ("stuck points") about the traumatic event(s) as well as current thoughts about self, others, and the world; and to promote a more balanced set of beliefs about oneself, others, and the world. It has four main parts: education about PTSD and CPT, processing the trauma, learning to challenge thoughts about the trauma, and trauma themes.
Psychological	Cognitive Restructuring (CR)	A technique used in cognitive therapy and cognitive behavior therapy to help the patient identify inaccurate and/or unhelpful thoughts and beliefs challenge them, and then modify them so that they are more adaptive.
Psychological	Cognitive Therapy (CT)	Therapy that aims to modify negative appraisals, correct memory disturbances, and remove problematic behavioral strategies.
Psychological	Concurrent Treatment of PTSD and Substance Use Disorders using Prolonged Exposure (COPE)	A cognitive-behavioral treatment for patients with comorbid PTSD and substance use disorder that integrates prolonged exposure and relapse prevention (Back et al., 2014).
Psychological	Creating Change	A manualized trauma-focused cognitive-behavioral model for trauma and/or addiction. By the developer of Seeking Safety, it has the same style and format as Seeking Safety but focuses on the past instead of the present (Najavits, 2024)
Psychological	Dialectical Behavior Therapy (DBT)	A third-wave CBT approach applying techniques from behavior therapy, CBT, and mindfulness and teaches patients how to regulate their emotions in any given situation.
Psychological	Dialogical Exposure Therapy (DET)	An integration of CBT and Gestalt techniques where the patient confronts the trauma experience.
Psychological	Emotional Freedom Techniques (EFT)	Also called "tapping," it is a method that combines imaginal exposure with applying light pressure to certain points on the body, in a specific sequence, while verbalizing affirmations.

Intervention		Description of Treatment
Psychological	Eye Movement Desensitization and Reprocessing (EMDR) Therapy	EMDR is an eight-phase psychotherapy that facilitates the accessing and processing of traumatic memories to bring these to an adaptive resolution. During EMDR therapy, the patient imaginably attends to emotionally disturbing material in brief sequential doses (sets) while simultaneously focusing (dual attentional focus) on an external bilateral stimulus such as eye movements, sounds, or tapping. Between sets, patients are asked to report what comes to mind and often report associations that they had not previously contemplated. They are also invited to verbally discuss their traumatic experiences as well as their shifting perspectives. Body scans are also utilized to determine the patient's degree of resolution.
Psychological	Family therapy	Treatment that is designed to address specific issues affecting the health and functioning of a family with the belief that problems cannot be successfully addressed or solved without understanding the dynamics of the group.
Psychological	Imagery Rehearsal Therapy (IRT)	A manualized therapy that aims to reduce intensity and frequency of nightmares by increasing knowledge about sleep and selecting a repetitive target nightmare, scripting a change to their nightmare that increases their sense of mastery or control, and then rehearsing the change in the mind's eye, each night before sleep.
Psychological	Imaginal Exposure (IE)	Vividly imagining a distress-evoking memory, object, situation, or activity. In PTSD, this involves revisiting the memory of a traumatic experience, and typically recounting verbally, in order to reduce feelings of fear.
Psychological	Integrated CBT (ICBT)	A manual guided therapy for patients with co-occurring PTSD and substance use disorder where CBT skills are incorporated to address their PTSD and substance use symptoms.
Psychological	In-Vivo Exposure	Directly facing a feared object, situation, or activity in real life. For example, someone with a fear of snakes might be instructed to handle a snake, or someone with social anxiety might be instructed to give a speech in front of an audience.
Psychological	Interpersonal Psychotherapy (IPT)	Brief, attachment and communication-focused therapy that centers on the biopsychosocial/cultural/spiritual model. It is designed to reduce symptoms, improve interpersonal functioning and increase social support.
Psychological	Memory Specificity Training (MEST)	A manualized approach that improves one's recall of specific events/ autobiographical memory.
Psychological	Metacognitive Therapy (MCT)	Trains patients to increase awareness and identify distorted patterns in thinking.
Psychological	Mindfulness-Based Stress Reduction (MBSR)	An eight-week group program where patients are trained with a variety of mindfulness and meditation skills with the goal of improving emotion regulation.
Psychological	Mindfulness training	A training program that emphasizes focusing on the present moment and to observe nonjudgmentally thoughts and feelings from a third-person point of view.
Psychological	Narrative Exposure Therapy (NET)	NET involves recognizing and creating an account or testament of what happened, in a way that serves to recapture the patient's self-respect and acknowledges their human rights. Often, small groups of individuals receive four to 10 sessions of NET together, although it also can be provided individually.
Psychological	Present-Centered Therapy (PCT)	A common factored approach used to address either trauma or non-trauma experiences using a supportive, problem-solving treatment framework.

Intervention		Description of Treatment
Psychological	Prolonged Exposure (PE) or modified PE (mPE)	A specific cognitive behavioral therapy designed to help patients with PTSD emotionally process their traumatic experiences through repeated revisiting and recounting of their trauma memories (imaginal exposure) following by processing, and repeated, gradual confrontation of feared situations, places, and things that are objectively safe but feel more dangerous following the traumatic event (in vivo exposure).
Psychological	Psychodynamic Therapy (PDT)	A form of in-depth talk therapy based on the theories and principles of psychoanalysis with a focus on unconscious processes as they are manifested in an individual's present behavior. The goals are self-awareness and understanding of the influence of one's past on present behavior.
Psychological	Relaxation training/applied relaxation	Meditation, muscle relaxation, and deep breathing strategies to lower anxiety and stress levels.
Psychological	Seeking Safety (SS)	A present-focused manualized cognitive-behavioral model that teaches coping skills to help patients with trauma and/or addiction attain greater safety in their life.
Psychological	Skills Training in Affective and Interpersonal Regulation (STAIR)	A CBT-mixed modality where it teaches patients how to identify and manage their emotions, improve distress tolerance, and improve interpersonal relationships.
Psychological	Stress Inoculation Training (SIT)	SIT exposes patient to stress in a controlled fashion to help with consequences of previous stress and learn adaptive strategies for dealing with the situation in the future.
Psychological	Structured Approach Therapy (SAT)	A couples-based treatment for PTSD.
Psychological	Trauma Affect Regulation (TAR)	A manualized therapy that teaches skills for processing and managing trauma-related reactions to stressful situations. The goal is to help patients regulate intense emotions.
Psychological	Trauma-Focused CBT	An eclectic grouping of cognitive behavioral therapies that directly addresses thoughts, feelings, and/or memories of the traumatic event using a primary component of exposure and/or cognitive restructuring.
Psychological	Trauma Management Therapy (TMT)	A multicomponent treatment that focuses on reducing chronic PTSD symptoms, which include reduction in avoidant behaviors, "fight-or-flight responses" and improving interpersonal skills and emotion regulation as well as increasing activities that bring pleasure.
Psychological	Written Exposure Therapy (WET)	A treatment protocol where patients write in detail about the traumatic experience, including their thoughts and emotions. The treatment consists of 5 sessions, where 30-minutes of the sessions are devoted to writing.
Pharmacological	Alpha-Adrenergic Blockers	A class of medication, which includes prazosin.
Pharmacological	Anticonvulsants/Mood Stabilizers	A class of medications, which include topiramate, tiagabine, lamotrigine, carbamazepine, and divalproex
Pharmacological	Atypical Antipsychotics (ATAs)	A class of medications, which include olanzapine, risperidone, quetiapine.
Pharmacological	Benzodiazepines	A class of medications, which include alprazolam, diazepam, lorazepam, clonazepam.
Pharmacological	Dopamine Beta-Hydroxylase Inhibitors	A class of medication, which includes nepicastat.
Pharmacological	ganaxolone	A medication that is commonly used to treat seizures.

Intervention		Description of Treatment
Pharmacological	Hypnotics	Medications used to induce sleep or drowsiness, which include eszopiclone.
Pharmacological	Monoamine Oxidase Inhibitors (MAOIs)/Reversible Inhibitors of Monoamine Oxidase-A (RIMAs)	A class of medications, which include brofaromine, phenelzine.
Pharmacological	NK-1 Receptor Antagonists	A class of medication, which includes orvepitant.
Pharmacological	Other second-generation antidepressants/Noradrenaline and Specific Serotonergic Antidepressants (NaSSAs)/ Serotonin Antagonist and Reuptake Inhibitors (SARIs)	A class of medications, which include bupropion, mirtazapine, nefazodone, trazodone.
Pharmacological	Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)	A class of medication, which includes venlafaxine ER
Pharmacological	Selective Serotonin Reuptake Inhibitors (SSRIs)	A class of medications, which include citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, sertraline.
Pharmacological	Tricyclic Antidepressants (TCAs)	A class of medications, which include imipramine, amitriptyline, desipramine.
Pharmacological Augmentation	d-cycloserine Augmentation	Combining CBT techniques and d-cycloserine for treating anxiety disorders (Hofmann et al., 2006; Hofmann et al., 2013).
Pharmacological Augmentation	eszopiclone Augmentation	Using eszopiclone as an augmentation to another intervention.
Pharmacological Augmentation	prazosin Augmentation	Using prazosin as an augmentation to another intervention.
Pharmacological Augmentation	risperidone Augmentation	Using risperidone as an augmentation to another intervention.
Pharmacological Augmentation	topiramate Augmentation	Using topiramate as an augmentation to another intervention.
Complementary/Integrative	Bathysmed® Meditative Diving	Combines meditative practices with scuba diving.
Complementary/Integrative	Yoga	A system of physical postures, breathing techniques, and sometimes meditation designed to promote physical and emotional well-being.
Complementary/Integrative	Trauma-Sensitive Yoga	Based on hatha yoga with a focus on reconnecting with yourself in a safe, supportive environment.
Psychedelic	Ketamine	An anesthetic that's used to aid in processing the trauma.
Psychedelic	3,4-Methylenedioxymethamphetamine (MDMA)-assisted Psychotherapy	Use of prescribed doses of the stimulant MDMA as an adjunct to psychotherapy sessions.

References

Back, S. E., Foa, E. B., Killeen, T. K., Mills, K. L., Teesson, M., Dansky Cotton, B., Carroll, K. M., & Brady, K. T. (2014). *Concurrent treatment of PTSD and substance use disorders using prolonged exposure (COPE): Therapist guide.* Oxford University Press.

Hofmann, S. G., Meuret, A. E., Smits, J. A. J., Simon, N. M., Pollack, M. H., Eisenmenger, K., Shiekh, M., & Otto, M. W. (2006). Augmentation of exposure therapy with d-cycloserine for social anxiety disorder. *Archives of General Psychiatry, 63*(3), 298–304. https://jamanetwork.com/journals/jamapsychiatry/fullarticle/209432

Hofmann, S. G., Smits, J. A. J., Rosenfield, D., Simon, N., Otto, M. W., Meuret, A. E., Marques, L., Fang, A., Tart, C., & Pollack, M. H. (2013). D-cycloserine as an augmentation strategy with cognitive-behavioral therapy for social anxiety disorder. *American Journal of Psychiatry, 170*(7), 751–758. https://doi.org/10.1176/appi.ajp.2013.12070974

Najavits, L. M. (2024). *Creating change: A past-focused treatment for trauma and addiction.* Guilford Press.

APPENDIX B

Definition of Key Terms

Advisory Steering Committee (ASC). The Advisory Steering Committee is a group of distinguished psychologists appointed by the APA Board of Directors (BOD) to oversee APA's CPG development process. The ASC selects which nominated topics will be considered for guidelines and assembles the panels who write the guidelines, but they are not directly involved in conducting SRs, nor in writing CPGs. In addition, while the ASC reports to the BOD, the ASC operates autonomously from APA governance to prevent real or perceived COIs.

Agency for Healthcare Research and Quality (AHRQ). An agency within the US Department of Health and Human Services, AHRQ supports research that helps people make more informed decisions and improves the quality of health care services. AHRQ's mission is to improve the quality, safety, efficiency, and effectiveness of health care for all Americans, with the following focus areas: comparing the effectiveness of treatments; quality improvement and patient safety; health information technology; prevention and care management; and health care value. AHRQ develops systematic reviews on topics of greatest public health impact. Topic nomination is an open process through AHRQ's Effective Healthcare Program; APA uses this as one mechanism to support SRs for CPG development.

AMSTAR-2 (A MeaSurement Tool to Assess Reviews-Version 2). A tool designed to systematically assess the quality of the methods used to conduct systematic reviews. Further information about AMSTAR-2 can be found in Shea et al. (2017): https://www.bmj.com/content/358/bmj.j4008.

Applicability. Consistent with the aim of comparative effectiveness research, that is, to help consumers, clinicians, purchasers, and policy makers to make informed decisions that will improve health care at both the individual and population levels. Applicability is analogous to external validity or generalizability (IOM, 2011a).

Benefit. A positive or valued outcome of an action or event (IOM, 2011a).

Bias. A systematic deviation or process that favors one outcome over others (Gluud, 2006). Bias may lead to under- or over-estimation of treatment effects. It is impractical and most likely impossible to quantify every potential source of bias that may influence an individual study (Chavalarias & Ioannidis, 2010); however, a number of specific methodological flaws or limitations in research design, implementation, analysis, and evaluation often produce biased outcomes.

Cochrane. Founded in 1993, Cochrane is an international nonprofit organization whose mission is "to produce trusted synthesized evidence, make it accessible to all, and advocate for its use." Cochrane meets its mission in part by not accepting commercial or financial interests in the production and dissemination of systematic reviews and training manuals. Its manuals and systematic reviews of the treatment for particular health conditions are provided for free to researchers, health care professionals, policy makers, and the general public. Additional information about Cochrane can be found at: https://www.cochrane.org/

Comparative effectiveness research (CER). The generation and synthesis of evidence that compares the benefits and harms of alternative methods to prevent, diagnose, treat, and monitor a clinical condition or to improve the delivery of care. The purpose of CER is to help consumers, clinicians, purchasers, and policy makers to make informed decisions that will improve health care at both the individual and population levels. Also referred to as clinical effectiveness research (IOM, 2011a).

Confidence interval (CI). A confidence interval is a range around an estimate that conveys how precise the estimate is; for example, an estimate of the risk of an event occurring or an estimate such as a risk ratio that compares the risk with and without an intervention. The confidence interval is a guide to how sure we can be about the quantity we are interested in. The narrower the range between the two numbers, the more confident we can be about what the true value is; the wider the range, the less sure we can be. The width of the confidence interval reflects the extent to which chance may be responsible for the observed estimate (with a wider interval reflecting more chance). 95% Confidence Interval (CI) means that we can be 95 percent confident that the true size of effect is between the lower and upper confidence limit. Conversely, there is a 5 percent chance that the true effect is outside of this range (Treweek et al., 2013).

Delphi (Delphi method). Is a structured method in which a panel of experts answer questionnaires iteratively over a few rounds. Anonymous summaries of responses are provided after each round to allow participants to revise responses and converge on answers.

Effectiveness. The impact of an intervention compared to active treatment.

Efficacy. The impact of an intervention compared to an inactive control.

Estimate of effect. The observed relationship between an intervention and an outcome expressed as, for example, a number needed to treat to benefit, odds ratio, risk difference, risk ratio, standardized mean difference, or weighted mean difference.

Evidence. Information on which a decision or guidance is based. Evidence is obtained from a range of sources, including randomized controlled trials, observational studies, and expert opinion of clinical professionals or patients (IOM, 2011b).

GRADE (GRADE collaboration and Framework). The Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group, which began in the year 2000, is an international collaboration of scholars with an interest in addressing the shortcomings of present grading systems for CPGs in health care. The working group has developed a sensible and transparent framework for grading quality of evidence and strength of recommendations, typically referred to as "GRADE" (or the GRADE system). Many international organizations provided input into the development of the approach and have started using it (for further information, see http://www.gradeworkinggroup.org/).

Guideline Update Panel (GUP). A multidisciplinary Guideline Update Panel is assembled for the purpose of updating a specific CPG. GUPs are tasked with generating treatment recommendations from systematic reviews and drafting the content of the CPGs. These activities take place independently from APA governance/staff, the ASC, and Systematic Review Teams, who play no part in developing the CPG recommendations. There is some interaction between the SRT and GUP to ensure that the systematic review will meet the needs of the CPG developers; yet the nature of the interaction is transparent and circumscribed to maintain the objectivity and validity of both the systematic review and the CPG.

Harm. A hurtful or adverse outcome of an action or event, or with regard to CPGs, a treatment or health care decision/recommendation, whether temporary or permanent (IOM, 2011b).

Institute of Medicine (IOM, now National Academy of Medicine). A private, nonprofit institution that provides objective, timely, authoritative information and advice concerning health and science policy to the government, the corporate sector, the professions, and the public under a congressional charter.

Meta-analysis. The use of quantitative statistical methods in a systematic review to integrate the results of included studies.

Meta-Analytic Database of Psychotherapy Trials (Metapsy). An open access database platform developed by researchers from the Vrjie Universiteit Amsterdam designed to analyze randomized controlled psychotherapy research trials for the treatment of specific disorders or conditions. Additional information about Metapsy can be found at https://www.metapsy.org/.

Outcome. A change resulting from an intervention. In evaluations, a potential consequence of an intervention that is measured after the intervention has been implemented, is used to assess the potential beneficial and harmful effects of the intervention. **Critical outcomes** are the outcomes of greatest importance for answering key questions in systematic reviews. **Health outcomes**, also referred to as **Patient-Centered outcomes**, are clinical outcomes that affect how patients feel, live, or survive, such as quality of life, rate of survival, and patient satisfaction (Boyd et al., 2012).

Patient-Centeredness. Respect for and responsiveness to individual patient preferences, needs, and values; helps ensure that patient values and circumstances guide clinical decisions (IOM, 2011a).

PICOTS (questions). Systematic reviews seek to answer clearly formulated key questions that will simplify decision-making about real-world practices, and thereby inform CPG recommendations. These key questions are developed using the PICOTS framework, an acronym denoting the following components that should be specified in each key question: Patient populations (P), Interventions (I), Comparison conditions (C), Outcomes (O), Timing or timeframe (T), and Settings (S) (Samson & Schoelles, 2012). For this reason, the key questions in systematic reviews are frequently referred to as *PICOTS* (or *PICOTS questions)*. *Timing* and *Settings* are newer additions to the framework; hence, key questions may also be called PICOS (or PICO questions) by some investigators.

Publication bias. A bias caused by only a subset of all the relevant data being available. The publication of research can depend on the nature and direction of the study results. Studies in which an intervention is not found to be effective are sometimes not published. Because of this, systematic reviews that fail to include unpublished studies may overestimate the true effect of an intervention. In addition, a published report might present a biased set of results (e.g., only outcomes or sub-groups where a statistically significant difference was found).

Quality of evidence. The extent to which one can be confident that the estimates of an intervention's effectiveness are adequate to support a particular decision or recommendation (IOM, 2011b; Schünemann et al., 2013). AHRQ uses "strength of evidence" (SOE) to refer to the same basic concept.

Randomized controlled trial (RCT). An experiment in which two or more interventions, often including a control intervention or no intervention, are compared by randomly allocating participants to the interventions. The term 'trial' is sometimes used to refer to randomized controlled trials (RCTs); however, the term may also be used to refer to quasi-randomized trials (which do not randomly assign participants to groups).

Relative Effects. A quantitative measure for evaluating harms and benefits of treatment, expressed as the ratio of two indicators of the frequency of the outcome. A *risk ratio* (RR) is the ratio between the risk (incidence) of the outcome event in the intervention group and the risk in the control group. For example, if the risk of the outcome event in the intervention group is 5% (5 per 100) and the risk in the control group is 20% (10 per 100), the RR is .05 / .20 = .25. If the RR is less than 1, the risk of the outcome event in the intervention group is less than the control group. If the RR is equal to 1, the risk in the two groups is equal. If the RR is greater than 1, the intervention increases the risk of the outcome compared to the control group.

An odds ratio (OR) is also a measure of relative effects, in this case, the odds (not risk) in the intervention group compared to the odds (not risk) in the control group. An odds is a mathematical formula for the probability of an event happening divided by the probability of that event not happening or, mathematically: odds = p / (1-p). Thus, if the risk in the intervention group is 5% (i.e., .05), then the odds in the intervention group is .05 / .95 = .05 (with rounding). If the risk in the control group is .20, then the odds in the control group is .20 / .80 = .25. The odds ratio is then .05 / .25 = .20. Odds ratios can be interpreted similarly to risk ratios. However, when the risk of the outcome event is high, the odds ratio will be different from the risk ratio.

Risk of bias. The extent to which flaws in the design and execution of a collection of studies could bias the estimate of effect for each outcome under study (IOM, 2011b).

Strength of Evidence. The extent to which one can be confident that the estimates of an intervention's effectiveness are adequate to support a particular decision or recommendation (IOM, 2011b; Schünemann et al., 2013). GRADE uses "quality of evidence" to refer to the same basic concept.

Strength of Recommendation. The strength of a recommendation reflects the extent to which one can be confident that the desirable outcomes of a treatment alternative outweigh the undesirable outcomes, across the range of patients to whom the recommendations apply (IOM, 2011b; Schünemann et al., 2013).

Study Quality. For an individual study, study quality refers to all aspects of a study's design and execution and the extent to which bias is avoided or minimized. A related concept is internal validity; that is, the degree to which the results of a study are likely to be true and free of bias (IOM, 2011b).

Systematic Review (SR). A rigorous approach to synthesizing data from research studies on the benefits, harms and effectiveness of alternative treatment options that pertain to a particular clinical population (IOM, 2011b). Systematic reviews use prespecified criteria for screening, selecting, appraising, grading, and synthesizing outcomes, from a body of research studies, to answer specific clinical questions in areas of uncertainty. SRs seek to minimize bias by using explicit, standardized procedures (Cumpston et al., 2024). The use of standardized criteria enhances the reliability of the findings and confidence in the conclusions about the relative advantages of alternate treatment approaches (IOM, 2011a).

Transparency. Methods are explicitly defined, consistently applied, and available for public review so that observers can readily link judgments, decisions, or actions to the data on which they are based. Allows users to assess the strengths and weaknesses of the systematic review or CPG (IOM, 2011a).

Trauma-Informed Care. A philosophy underlying treatment that recognizes the role of psychological trauma in developmental, mental health, medical/physical, and social consequences in a significant proportion of the general population and consequently in those who seek treatment. Practitioners attend to the role of trauma in the etiology of their patients' difficulties in their assessment, understanding, and treatment.

Trauma-Focused Treatment. Treatment approaches that directly focus on the details of the trauma event(s)/experience(s) in order to assist the patient to process the cognitions, emotions, somatic reactions, and/or memories associated with the trauma. The theory is that once these are processed sufficiently to arrive at a point of resolution, completion, or a change of perspective, trauma symptoms should decline or remit.

Treatment Recommendation. In the context of CPGs, treatment recommendations are statements that propose a course of action with respect to a specific health care service, test, psychotherapy or pharmacotherapy, etc., or procedure. Well-constructed recommendations specify what should be offered or provided to patients, as well as under what specific conditions the recommendation applies (Rosenfeld & Shiffman, 2009; Shiffman, 2009). In addition, the IOM (2011a) specifies that CPG recommendations should include alternative treatment options.

References

Boyd, C. M., Singh, S., Varadhan, R., Weiss, C. O., Sharma, R., Bass, E. B., & Puhan, M. A. (2012). *Methods for benefit and harm assessment in systematic reviews: Methods research report*. (AHRQ Publication No. 12(13)-EHC150-EF). U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://www.ncbi.nlm.nih.gov/books/NBK115750/

Chavalarias, D., & Ioannidis, J. P. A. (2010). Science mapping analysis characterizes 235 biases in biomedical research. *Journal of Clinical Epidemiology, 63*(11), 1205–1215. https://doi.org/10.1016/j.jclinepi.2009.12.011

Cumpston, M., Flemyng, E., Thomas, J., Higgins, J. P. T., Deeks, J. J., & Clarke, M. J. (2024). Chapter I: Introduction. In J. P. T. Higgins, J. Thomas, J. Chandler, M. Cumpston, T. Li, M. Page, & V. Welch (Eds.) *Cochrane handbook for systematic reviews of interventions* (Version 6.5). https://training.cochrane.org/handbook/current/chapter-i

Gluud, L. L. (2006). Bias in clinical intervention research. *American Journal of Epidemiology, 163*(6), 493-501. https://doi.org/10.1093/aje/kwj069

Institute of Medicine. (2011a). *Clinical practice guidelines we can trust.* National Academies Press. https://doi.org/10.17226/13058

Institute of Medicine. (2011b). *Finding what works in health care: Standards for systematic reviews*. National Academies Press. https://doi.org/10.17226/13059

Rosenfeld, R. M., & Shiffman, R. N. (2009). Clinical practice guideline development manual: a quality-driven approach for translating evidence into action. *Otolaryngology-Head and Neck Surgery, 140*(6), S1-S43. https://doi.org/10.1016%2Fj.otohns.2009.04.015

Samson, D., & Schoelles, K. M. (2012). Chapter 2: Developing the topic and structuring systematic reviews of medical tests: Utility of PICOTS, analytic frameworks, decision trees, and other frameworks. In S. M. Chang, D. B. Matchar, G. W. Smetana, & C. A. Umscheid (Eds.) *Methods guide for medical test reviews* (AHRQ Publication No. 12-EHC017). U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/methods-guidance-tests-topics_methods.pdf

Schünemann, H., Brożek, J., Guyatt, G., & Oxman, A. (Eds.). (2013). *GRADE handbook*. https://gdt.gradepro.org/app/handbook/handbook.html

Shea, B. J., Reeves, B. C., Wells, G., Thuku, M., Hamel, C., Moran, J., Moher, D., Tugwell, P., Welch, V., Kristjansson, E., & Henry, D. A. (2017). AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ, 358*, Article j4008. https://doi.org/10.1136/bmj.j4008

Shiffman, R. N. (2009, November 9). *Quest for a gold standard for guideline development* [Paper presentation]. Institute of Medicine Committee on Developing Trustworthy Clinical Practice Guidelines, Washington, DC, United States.

Treweek, S., Oxman, A. D., Alderson, P., Bossuyt, P. M., Brandt, L., Brożek, J., Davoli, M., Flottorp, S., Harbour, R., Hill, S., Liberati, A., Liira, H., Schünemann, H. J., Rosenbaum, S., Thornton, J., Vandvik, P. O., Alonso-Coello, P., & DECIDE Consortium. (2013). Developing and evaluating communication strategies to support informed decisions and practice based on evidence (DECIDE): protocol and preliminary results. *Implementation Science, 8*, Article 6. https://doi.org/10.1186/1748-5908-8-6

APPENDIX C:

APA Declarations / Conflicts of Interest Form

Clinical Practice Guideline Initiative

CONFLICT OF INTEREST POLICY
AND
DECLARATION OF INTERESTS

_____
Year

Covered Individual:

Name: _____

Please indicate your role in the initiative:

____ Advisory Steering Committee (ASC) Member

____ Guideline Development Panel (GDP) Member

» *If GDP Member, please name the topic of the panel:* _____

____Guideline Update Panel (GUP) Member

» *If GUP Member, please name the topic of the panel:* _____

____Consultant

____APA Staff

Instructions:
Please read the APA Conflict of Interest Policy and complete the Declaration of Interests form and sign the statement at the end. *(ASC Members: Please also read supplementary instructions.)*

Conflict of Interest Policy

It is the aim of the American Psychological Association ("APA") to transact all its business, including the APA clinical practice guideline initiative, lawfully and impartially. In some situations, the relationship of a Covered Individual (as defined below) with a third party, financial or otherwise, could reasonably be construed to create a conflict between the interests of APA and the interests of the Covered Individual.

Covered Individuals are required to disclose to APA any actual, potential, or perceived conflict of interest ("COI") with APA or with their role in the clinical practice guideline initiative, including conflicts from the past 12 months and expected conflicts in the upcoming 12 months. A COI may be of a financial, intellectual, or other nature, as defined below. APA requires Covered Individuals to disclose COIs prior to official appointment to a committee/panel or as a consultant, as well as at the time points noted below. The existence of COIs will not necessarily preclude participation in the guideline initiative, although it may require limiting a Covered Individual's role. APA staff involved in the initiative may also be asked by their supervisors to disclose COIs, following the same policy as for Covered Individuals.

This policy is designed to promote transparency, to protect the integrity of the guideline initiative, and to provide a mechanism to help protect Covered Individuals and APA from legal concerns associated with conflicts of interest.

Covered Individuals: This policy applies to members of the Advisory Steering Committee and the Guideline Development Panels of the APA clinical practice guideline initiative and to consultants who are formally engaged by APA for work on the initiative.

Term: Covered Individuals shall be bound by this conflict-of-interest policy during the official term of their position on the committee/panel or as a consultant.

Definition of COI: A 2011 report from the Institute of Medicine ([IOM] now called the National Academy of Medicine) includes the following definition of COI: "a divergence between an individual's private interests and his or her professional obligations such that an independent observer might reasonably question whether the individual's professional actions or decisions are motivated by personal gain, such as financial, academic advancement, clinical revenue streams, or community standing." (See IOM, 2011, p. 78; the definition is drawn from Schünemann et al., 2009, p. 565.)

The IOM report also discusses intellectual COIs relevant to clinical practice guidelines, which it defines as "academic activities that create the potential for an attachment to a specific point of view that could unduly affect an individual's judgment about a specific recommendation" (IOM, 2011, p. 78; the definition is drawn from Guyatt et al., 2010, p. 739).

COIs can arise in various situations and may involve the individual or a member of the individual's family (spouse, domestic partner, parent, child, or another close relative). Examples of potential COIs include, but are not limited to, the following:

- Receiving payment for directly providing, or training other professionals to provide, health services related to the topic(s) of the guideline(s) being developed.
- Receiving honoraria for presentations or discussions of scientific or clinical issues related to the topic(s) of the guideline(s) being developed.
- Receiving royalties for books or other materials that address scientific or clinical issues related to the topic(s) of the guideline(s) being developed.
- Receiving funding, in the form of grants or contracts, for research on scientific or clinical issues related to the topic(s) of the guideline(s) being developed.
- Serving in a governance or other volunteer position in an organization that provides health services, promotes research related to health services, or develops or advocates for health service policies, related to the topic(s) of the guideline(s) being developed.
- Having strongly held opinions or other intellectual biases that might compromise objectivity in addressing the topic(s) of the guideline(s) being developed.
- Having a significant ownership interest in or significant capacity to influence decisions of a firm or organization that is an APA competitor, customer, or supplier, or a firm that conducts research or provides health services related to the

topic(s) of the guideline(s) being developed.

- Being employed by or performing other work (including consulting) for a competitor, customer, or supplier of APA, regardless of the nature of that work.
- Conduct of APA business of any kind, or arranging for such business, with a firm that one owns or controls.
- Acceptance of any money, property, or anything of value from a person or firm doing or seeking to do business with APA.
- Receipt of direct or indirect economic benefit as a consequence of acquisition, lease, or sale by APA of any property, facilities, materials, or services.

COI Reporting: Covered Individuals must complete a Declaration of Interests form (appended below) disclosing any actual, potential, or perceived COIs prior to appointment to a committee/panel or as a consultant, and thereafter on an annual basis. If, during the year, a change occurs in a Covered Individual's COIs or in their family members' COIs, the Covered Individual must report that information immediately to APA staff who work on the clinical practice guideline initiative, who will share it with the relevant committee/panel Chair or Vice Chair. Covered Individuals are expected to provide any updates regarding their COIs orally at the beginning of all official committee/panel meetings.

In addition, Covered Individuals should disclose any professional papers or presentations on which they are listed as authors, prior to publication or delivery, that pertain to the topic(s) of the guideline(s) with which they are involved. This disclosure should be made to APA staff involved in the initiative.

If a Covered Individual is unsure whether particular information should be reported, or if the information is sensitive or confidential, the Individual may first consult with APA staff involved in the initiative about whether and how to report it. With the individual's permission, the staff may then seek further guidance from the Chair or Vice Chair of the relevant committee/panel.

Disclosure of any actual, potential, or perceived COI is the responsibility of everyone participating in the clinical practice guideline initiative. In general, if any Covered Individual or APA staff member is aware of circumstances that may constitute a COI involving another participant in the initiative, then the individual should first discuss it with that participant. If such a discussion is not appropriate or if the discussion does not produce a satisfactory result, then they should discuss it with APA staff and/or the relevant committee/panel chair or vice chair.

COI Review and Management: Each Covered Individual's completed Declaration of Interests form will be reviewed by APA staff and by the Chair and/or Vice Chair of the relevant committee/panel (or only by APA staff for consultants). The individual's resume or curriculum vitae, as well as publicly available materials about the individual, may also be examined in the course of the review. The primary purpose of the review is to determine whether the individual has any actual, potential, or perceived COIs that would preclude the individual from participation in the clinical practice guideline development initiative or require resignation from any role that they already have in the initiative.

Having one or more COIs does not necessarily mean that a Covered Individual cannot be involved in the initiative. If the reviewers determine that an individual's COIs do not preclude participation, then the reviewers will identify what actions, if any, may be needed to resolve or manage the impact of the COIs on the integrity (both actual and perceived) of the initiative. Examples of such actions may include limitations on the individual's participation in discussions, deliberations, or voting on specific matters and not being counted in determining a quorum for all or portions of a particular committee/panel meeting. Such actions would not prevent the individual from briefly stating their position or answering questions on relevant matters. Possible actions for managing the impact of COIs will be discussed with the Covered Individual, but final decisions on which actions are taken are made by APA staff in consultation with the relevant committee/panel chair and/or vice chair. In some cases, the APA General Counsel may participate in making such decisions. Also, in some cases in which the Covered Individual is a member of a Guideline Development or Update Panel or a consultant, the chair and/or vice chair of the Advisory Steering Committee may participate in making such decisions.

If any new COIs are reported or discovered during the period after a Declaration of Interests form has been submitted, APA staff and the relevant committee/panel chair and/or vice chair will determine whether any further actions are required for managing their impact on the initiative.

For Covered Individuals who are members of a committee/panel, information about all actual, potential, and perceived COIs are shared with all other members of the committee/panel.

Information about all actions taken to resolve or manage the impact of COIs is also shared with all members of the committee/panel.

Record of COIs: APA retains a copy of all completed Declaration of Interests forms and related documents. Both summary and individual information about Covered Individuals' COIs and of actions taken to manage their impacts may be made available for public view; this information potentially includes completed Declaration of Interests forms.[21] Information about COIs and actions taken may also appear in meeting minutes and summaries, which will also be available for public view.

References

Guyatt, G., Akl, E. A., Hirsh, J., Kearon, C., Crowther, M., Gutterman, D., Lewis, S. Z., Nathanson, I., Jaeschke, R., & Schünemann, H. (2010). The vexing problem of guidelines and conflict of interest: A potential solution. *Annals of Internal Medicine, 152*(11), 738–741. https://doi.org/10.7326/0003-4819-152-11-201006010-00254

Institute of Medicine. (2011). *Clinical practice guidelines we can trust*. National Academies Press. http://www.nap.edu/catalog.php?record_id=13058

Schünemann, H. J., Osborne, M., Moss, J., Manthous, C., Wagner, G., Sicilian, L., Ohar, J., McDermott, S., Lucas, L., & Jaeschke, R. (2009). An official American Thoracic Society policy statement: Managing conflict of interest in professional societies. *American Journal of Respiratory Critical Care Medicine, 180*(6), 564–580. https://doi.org/10.1164/rccm.200901-0126ST

21 Note, no information will be publicly released about people who are nominated or considered for positions on a committee/panel or as consultants but not selected.

Declaration of Interests

The purpose of this Declaration is to identify your actual, potential, and perceived conflicts of interest with APA and with your role in the APA clinical practice guideline initiative. Having conflicts of interest does not necessarily preclude participation in the initiative. Decisions about how conflicts should be managed will be made by APA staff in consultation with the Chair or Vice Chair of any committee or panel of which you are a member.

Please answer the following questions by marking either "Yes" or "No" and then explaining any "Yes" answers in the space immediately following or by attaching supplementary materials.
When responding, please think about the full range of research, teaching, practice, writing, service work, and professional relationships in which you and your family members are involved. (You may consult with APA staff in advance if you have any questions or concerns about what information to provide on this form.)

The questions are organized into four sections:

I. **Intellectual Interests**

II. **Financial and Professional Interests**

III. **Interests Related to APA**

IV. **Other Relevant Interests**

For the purposes of this Declaration, a family member is a spouse, domestic partner, parent, child, or other relative with whom you have a comparably close tie.

Please attach a CV, resume, or other materials if these are needed to provide complete answers.

(Questions begin on next page.)

OVERVIEW

I. Intellectual Interests

a. Scientific/educational/professional communications
b. Communications with general audiences
c. Expert witness
d. Treatment and/or research approach
e. Topic proposals

II. Financial and Professional Interests

a. Payment for services or training
b. Honoraria
c. Royalties
d. Endorsements
e. Research funding
f. Employer
g. Roles in organizations
h. Influence/ownership/stock in health-related firms

III. Interests related to APA

a. APA roles
b. Influence/ownership/stock in firms of interest to APA
c. Paid work with other firms that do business with APA
d. Business ties to APA
e. Ties to others seeking business with APA
f. Other economic benefits related to APA business

IV. Other relevant interests

a. Other professional activities
b. Legal proceedings
c. Misconduct
d. Additional activities
e. Relationships

I. INTELLECTUAL INTERESTS

(The questions in this section concern only you, not family members.)

1. Scientific/educational/professional communications

a.	Over the past 12 months, have you had any scientific, educational, or professional publications (*including in-press*) or made any scientific, educational, or professional presentations related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing? Has your name been included on a relevant speakers' bureau list? *Please include both paid and nonpaid work.*	___ No ___ Yes	*If "Yes," please explain:**
b.	Do you expect that, over the next 12 months, you will have any such publications or presentations or that your name will be included on a speakers' bureau list?	___ No ___ Yes	*If "Yes," please explain:**

* If "Yes" to any of these questions, please provide a list of the relevant publications, presentations, courses, and speakers' bureaus. You may attach a copy of your CV or resume at the end of this form but please make sure to add any items that do not yet appear on those documents.

2. Communications with general audiences

a.	Over the past 12 months, have you made presentations to a general (*nonacademic, nonscientific*) audience that address research, clinical, or policy issues related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing? Have you been involved in organizing any events that include such presentations?	___ No ___ Yes	*If "Yes," please explain:**
b.	Over the past 12 months, have you published articles or books for a general audience or produced materials for television, radio, or the Internet (e.g., blogs, online petitions, Facebook, LinkedIn, TED Talks, Twitter, YouTube) that address these issues? *Please include both paid and nonpaid work. You need not include formal research publications for academic or scientific audience.*	___ No ___ Yes	*If "Yes," please explain:**

c.	Do you expect that, over the next 12 months, you will be involved in any such activities?	___ No ___ Yes	*If "Yes," please explain:**

* If "Yes" to any of these questions, please provide a list of the relevant publications, presentations, courses, and speakers' bureaus. You may attach a copy of your CV or resume at the end of this form but please make sure to add any items that do not yet appear on those documents.

3. Expert witness

a.	Over the past 12 months, have you served as an expert witness in a court case or other legal proceeding on a matter related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you will serve as an expert witness in a legal proceeding?	___ No ___ Yes	*If "Yes," please explain:*

4. Treatment and/or research approach

Do you identify yourself as having a particular approach or orientation to treatment and/or research (theoretical, methodological, societal, etc.)? Do you believe others perceive you as having a particular approach or orientation?

_____ No _____ Yes

If "Yes," please explain:

5. Topic proposals

Have you previously proposed to APA or another organization that it develop (a) a clinical practice guideline on a particular topic or (b) a systematic review of research on a particular topic that could serve as a foundation for subsequent guideline development?

_____ No _____ Yes

If "Yes," please describe the topic, the organization, and the form by which you proposed it:

II. FINANCIAL AND PROFESSIONAL INTERESTS

(The questions in this section concern both you and family members. For the purposes of this Declaration, a family member is a spouse, domestic partner, parent, child, or other relative with whom you have a comparably close tie.)

1. Payment for services or training

a.	Over the past 12 months, have you or a family member received payment for directly providing, or training other individuals to provide, health services related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing (*Health services include professional, community-based, and peer support services*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will receive payment for such activity?	___ No ___ Yes	*If "Yes," please explain:*

2. Honoraria

a.	Over the past 12 months, have you or a family member received any honoraria for presentations or discussions of scientific or clinical issues related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing (*Please include honoraria that were donated to charity*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will receive any such honoraria?	___ No ___ Yes	*If "Yes," please explain:*

3. Royalties

a.	Over the past 12 months, have you or a family member received royalties or advance payments for books, films, or other materials that address scientific or clinical issues related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing (*Please include royalties that were donated to charity*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will receive any such royalties or advance payments?	___ No ___ Yes	*If "Yes," please explain:*

4. Endorsements

a.	Over the past 12 months, have you or a family member received monetary or other material compensation for endorsing a product or service related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing (*Please include compensation that was donated to charity*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will receive such compensation for an endorsement?	___ No ___ Yes	*If "Yes," please explain:*

5. Research funding

a.	Over the past 12 months, have you or a family member received funding, in the form of grants, fellowships, or contracts, for research or research training on scientific or clinical issues related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will receive any such funding?	___ No ___ Yes	*If "Yes," please explain:*

6. Employer

a.	Over the past 12 months, have you or a family member held a job with an employer that has economic, policy, or other interests in healthcare guidelines in general or in the particular topic(s) of the guideline(s) that you will be involved in developing or overseeing (*Please consider both full- and part-time positions and both permanent and temporary positions*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will hold a job with an employer that has such interests?	___ No ___ Yes	*If "Yes," please explain:*

7. Roles in organizations

a.	Over the past 12 months, have you or a family member served in a governance, advisory, or other position in an organization (other than APA) that provides health services, promotes research related to health services, or develops or advocates for health service policies, related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing?	___ No ___ Yes	*If "Yes," please explain:*

b.	Do you expect that, over the next 12 months, you or a family member will serve in such a position?	___ No ___ Yes	*If "Yes," please explain:*

8. Influence/ownership/stock in health-related firms

a.	Over the past 12 months, have you or a family member had significant capacity to influence decisions of a firm or organization that conducts research or provides health services related to the topic(s) of the guideline(s) being developed (*Health services include professional, community-based, and peer support services*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Over the past 12 months, have you and/or any family member(s) held an ownership interest greater than 5% in such a firm? Have you and/or any family member(s) owned stock in such a firm that exceeded $10,000 in value at any time during the past 12 months (*Please consider the total amounts held by you and family members, e.g., whether the stock that your spouse and your parent own adds up to more than $10,000 in value*)?	___ No ___ Yes	*If "Yes," please explain:*
c.	Do you or any family member hold stock options of any value in such a firm?	___ No ___ Yes	*If "Yes," please explain:*
d.	Do you expect that, over the next 12 months, you or a family member will have such capacity to influence a firm or have such ownership or stock interests?	___ No ___ Yes	*If "Yes," please explain:*

III. INTERESTS RELATED TO APA

(The questions in this section concern both you and family members. For the purposes of this Declaration, a family member is a spouse, domestic partner, parent, child, or other relative with whom you have a comparably close tie.)

1. APA roles

a.	Over the past 12 months, have you or a family member been a member of any APA governance group, task force, or advisory body (*Please include roles in APA divisions*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will serve as a member of such an APA group?	___ No ___ Yes	*If "Yes," please explain:*

2. Influence/ownership/stock in firms of interest to APA

a.	Over the past 12 months, have you or a family member had a significant capacity to influence decisions of a firm or organization that is an APA competitor, customer, or supplier?	___ No ___ Yes	*If "Yes," please explain:*
b.	Over the past 12 months, have you and/or any family member(s) held an ownership interest greater than 5% in such a firm? Have you and/or any family member(s) owned stock in such a firm that exceeded $10,000 in value at any time during the past 12 months (*Please consider the total amounts held by you and family members, e.g., whether the stock that your spouse and your parent own adds up to more than $10,000 in value*)?	___ No ___ Yes	*If "Yes," please explain:*
c.	Do you or any family member(s) hold stock options of any value in such a firm?	___ No ___ Yes	*If "Yes," please explain:*

d.	Do you expect that, over the next 12 months, you or a family member will have such capacity to influence a firm or have such ownership or stock interests?	___ No ___ Yes	*If "Yes," please explain:*

3. Paid work with other firms that do business with APA

a.	Over the past 12 months, have you or a family member been employed by or performed other work (*including consulting*) for a competitor, customer, or supplier of APA, regardless of the nature of that work?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will be engaged in such employment or work?	___ No ___ Yes	*If "Yes," please explain:*

4. Business ties to APA

a.	Over the past 12 months, have you or a family member conducted APA business of any kind, or arranged for such business, with a firm that is owned or controlled by you or a family member?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will conduct or arrange for such business?	___ No ___ Yes	*If "Yes," please explain:*

5. Ties to others seeking business with APA

a.	Over the past 12 months, have you or a family member accepted any money, property, or anything of value from a person or firm doing or seeking to do business with APA?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will accept any money, property, or anything of value from a person or firm doing or seeking to do business with APA?	___ No ___ Yes	*If "Yes," please explain:*

6. Other economic benefits related to APA business

a.	Over the past 12 months, have you or a family member received any direct or indirect economic benefit as a consequence of acquisition, lease, or sale by APA of any property, materials, or services?	___ No ___ Yes	*If "Yes," please explain:*
b.	Over the past 12 months, have you or a family member received any other direct or indirect economic benefit related to APA business that are not covered in the previous questions?	___ No ___ Yes	*If "Yes," please explain:*
c.	Do you expect that, over the next 12 months, you or a family member will receive any such economic benefit?	___ No ___ Yes	*If "Yes," please explain:*

IV. OTHER RELEVANT INTERESTS

(The questions in this section concern both you and family members. For the purposes of this Declaration, a family member is a spouse, domestic partner, parent, child, or other relative with whom you have a comparably close tie.)

1. Other professional activities

a.	Over the past 12 months, have you or a family member engaged in any other scientific, academic, clinical, business, or policy activities, either paid or unpaid, related to the topic(s) of the guideline(s) that you will be involved in developing or overseeing (*This question is asking about activities not already addressed in answers to the previous questions*)?	___ No ___ Yes	*If "Yes," please explain:*
b.	Do you expect that, over the next 12 months, you or a family member will engage in other such activities?	___ No ___ Yes	*If "Yes," please explain:*

2. Legal proceedings

At any point over the last 12 months, have you or a family member been under prosecution for a crime? Have you or family member been involved in any civil legal proceedings as either defendant or plaintiff (*Please include all such legal proceedings, including those not related to the topic(s) of the guideline(s) you will be involved in developing or overseeing*)?

____ No____ Yes

If "Yes" to either question, please explain:

3. Misconduct

At any point over the last 12 months, have you or a family member been under formal charges of misconduct by any organization? This may be any type of misconduct (ethical, academic, professional, research, financial, etc., including harassment and discrimination). What is the current status of any such charges or related investigation? If charges have been resolved, what was the outcome? (*Please include all such charges, including those not related to the topic(s) of the guideline(s) you will be involved in developing or overseeing.*)

____ No____ Yes

If "Yes," please explain:

4. Additional activities

Is there any other information regarding your or your family members' activities, including interactions with organizations and individuals, that you believe is relevant to the guideline(s) that you will be involved in developing or overseeing or to your working with APA (*Please focus on activities that may constitute actual, potential, or perceived conflicts of interest, and include activities that occurred* **more than 12 months ago or are expected to occur more than 12 months from now**)?

____ No____ Yes

If "Yes," please explain:

5. Relationships

Do you have any concerns that your work on guideline development or with APA could have a significant negative impact on any **professional or personal relationships** you have with mentors, students, trainees, colleagues, supervisors, funders, friends, or relatives (*For this question, please consider all relatives in addition to spouse, domestic partner, parents, and children*)?

____ No____ Yes

If "Yes," please explain:

Finally, please read, complete, and sign the following statement:

I, _____, have read and understood the requirements of **APA's Conflict of Interest Policy** above and I agree to abide by the Policy throughout the official term of my position in the APA clinical practice guideline initiative.

I have also fully and truthfully answered the questions in the **Declaration of Interests** above about all actual, potential, and perceived conflicts of interest.

If any new actual, potential, or perceived conflicts of interest arise, I agree to disclose them as soon as possible, but within no more than 30 days, to APA staff and to the chair or vice chair of any committee or panel of which I am a member.

_____

DocuSign® SignatureDate

Please attach your current CV, resume, or other materials, as needed, before submitting the DocuSign® form by clicking on the paper clip icon.

Please also sign the separate Intellectual Property Statement.

For any questions, please contact the APA Clinical Practice Guidelines Team at cpg@apa.org.

For APA Staff Use Only

APPENDIX D

Voting Procedures

Established by the Advisory Steering Committee (ASC)

1. What % should be considered a majority for winning a vote?

The ASC agreed that at least 70% of the whole constituted panel would constitute a strong recommendation. For conditional recommendations, agreement among more than 50% with less than 20% of panel members preferring an alternative recommendation must be reached. The denominator for voting will be the number of the entire panel membership, except in special cases, to be determined by the ASC. Such cases could include the lack of participation by a particular member in the guideline development process. APA staff will consult with ASC liaisons to panels as needed regarding special cases. However, panel members who are normally participatory, but have missed crucial conversations and/or votes due to extenuating circumstances, will still be allowed to share their opinions.

2. Should dissenting opinions from members that disagree be added to recommendation statements?

The ASC agreed that there may be a section in final guideline documents for any dissenting opinions that panel members have. A footnote will disclose the number of dissenting panel members and possibly their names.

APPENDIX E:

Study Eligibility Criteria

TABLE E1

Study Eligibility Criteria: Populations, Interventions, Comparators, Outcomes, Timing, and Settings (PICOTS) Framework

Category	Inclusion	Exclusion
Population (P)	Adults (ages 18 and older) with PTSD based on DSM-III, DSM-III-R, DSM-IV, DSM-IV-TR, DSM-5, DSM-5-TR, ICD-9, ICD-10, or ICD-11 criteria Adults (ages 18 and older) with complex PTSD based on ICD-11 criteria	Children and adolescents (ages 18 and younger) with PTSD People at risk of developing PTSD People with subsyndromal PTSD

Category	Inclusion	Exclusion
Interventions (I)	Individual and group intervention (in-person or virtual) that is facilitated by a licensed/certified mental health provider and/or socially sanctioned healer. Psychological interventions including, but not limited to: Brief eclectic psychotherapy Cognitive-behavioral therapy, such as cognitive restructuring, cognitive processing therapy, exposure-based therapies (prolonged exposure, narrative exposure), and coping skills therapy (may include components such as stress inoculation training, assertiveness training, biofeedback [including brainwave neurofeedback], or relaxation training) Eye movement desensitization and reprocessing Family-based therapies Hypnosis or Hypnotherapy Interpersonal Psychotherapy Peer-to-peer intervention [facilitated by a licensed/certified mental health provider] Polyvagal therapies Psychodynamic therapy Sensorimotor therapies Culturally adapted interventions Pharmacological interventions including, but not limited to: Selective serotonin reuptake inhibitors (SSRIs: citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline) Serotonin and norepinephrine reuptake inhibitors (SNRIs: desvenlafaxine, venlafaxine, and duloxetine) Other second-generation antidepressants (bupropion, mirtazapine, nefazodone, and trazodone) Tricyclic antidepressants (imipramine, amitriptyline, and desipramine) Alpha blockers (prazosin) Atypical antipsychotics (olanzapine and risperidone) Benzodiazepines (alprazolam, diazepam, lorazepam, and clonazepam) Anticonvulsants/mood stabilizers (topiramate, tiagabine, lamotrigine, carbamazepine, and divalproex) Complementary and Integrative Health Augmentation Interventions (e.g., psilocybin augmented with psychotherapy)	

Category	Inclusion	Exclusion
Comparators (C)	By Key Question (KQ): KQ 1: Psychological interventions listed above compared with one another or Usual care (as defined by the study) If the intervention that is commonly employed does not fall under the "treatment as usual/usual care" umbrella (e.g., Stress Inoculation Training) and nonactive (e.g., waitlist) control group, it will be categorized as "unspecified anonymous intervention" Waitlist (as defined by the study) No intervention Sham KQ 2: Pharmacological interventions listed above compared with one another or to placebo KQ 3: Psychological interventions listed above compared with pharmacologic interventions listed above KQ 4: Combinations of psychological and pharmacological interventions compared with either one alone (placebo, waitlist assignment, usual care, unspecified anonymous intervention, no intervention, or sham may be used in conjunction with the monotherapy arm) KQs 5 and 6: All studies including the comparators for KQs 1 through 4 will be eligible	

Category	Inclusion	Exclusion
Outcomes (O)	Critical Outcomes: Serious adverse events or harms [e.g., active suicidal intent, serious self-harm, or suicide] PTSD symptom reduction Loss of PTSD diagnosis [include threshold] Important Outcomes: Comorbidity [prevention or reduction of the following comorbid disorders]: Depression Substance use Affect dysregulation Suicidal ideation Dissociation Clinically meaningful change: Response Remission Good end state functioning (getting into the normative range on two out of three of the main outcomes [e.g., depression, functioning, anxiety, PTSD, etc.]) Maintenance of treatment gains (3, 6, 12-month follow-up) Treatment acceptability: Dropout Other adverse events or harms [e.g., disturbed sleep, agitation, weight gain, sedation, side effects to medication, etc.] Adverse events leading to withdrawals Quality of Life and Functioning: Quality of life improvement [e.g., subjective sense based on positive mood, vitality, and interest in things] Functional outcomes [e.g., work, social/interpersonal, home, return to work or active duty]	
Timing (T)	Any length, duration, intensity, and frequency of sessions, considering the total number of sessions plus the number of total hours in treatment, Any follow-up length, preferring studies that assessed follow-up at 6 months or longer post-intervention	

Category	Inclusion	Exclusion
Setting (S)	All settings (e.g., outpatient and inpatient primary care or specialty mental health care settings; community settings [e.g., religious and spiritual centers, community health centers, rape crisis centers]; military settings; criminal justice settings; partial hospitalization; refugee camps)	

APPENDIX F:

AMSTAR-2 Ratings

Methodological Quality of the Included Systematic Reviews/Meta-Analyses

Critical Domain (AMSTAR-2)	*PTSD GUP's Critical Domain							
Systematic Review	Total Score of PTSD GUP's Critical Domains (0 [low] - 4 [high])	Overall Confidence Rating (AMSTAR-2)	Included components of PICO	A priori study design	Explained selection of study designs for inclusion	Comprehensive literature search*	Duplicate study selection and data extraction	List of excluded studies and justify exclusion
Almeida et al., 2024	3.5	Critically Low	Y	Y	Y	Partial Y (Did not search reference list within ID'd studies, did not consult with experts, did not search for grey literature) (0.5)	Y	N
Borgogna et al., 2024	3.5	Critically Low	Y	Partial Y (Did not preregister protocol)	Y	Partial Y (Did not search reference list within ID'd studies, did not consult with experts, did not search for grey literature) (0.5)	Y	N
Choi et al., 2020	3	Critically Low	Y	Partial Y (did not preregister review nor provided justification for deviating from protocol)	N	N (0)	Y	N

Critical Domain (AMSTAR-2)	*PTSD GUP's Critical Domain							
Systematic Review	Total Score of PTSD GUP's Critical Domains (0 [low] - 4 [high])	Overall Confidence Rating (AMSTAR-2)	Included components of PICO	A priori study design	Explained selection of study designs for inclusion	Comprehen-sive litera-ture search*	Duplicate study selection and data extraction	List of excluded studies and justify exclusion
DeJesus et al., 2024	2	Critically Low	Y	Y	Y	Partial Y (Did not search reference list within ID'd studies, did not search trial/ study registries, did not search for grey literature) (0.5)	Y	N
Hoskins et al., 2021	3.5	Critically Low	Y	N	N	Partial Y (did not conduct search within 24 mos. of completion of review) (0.5)	Y	N
Illingworth et al., 2021	1	Critically Low	Y	Y	N	N (0)	Y	N
Jericho et al., 2022	3	Low	Y	Y	N	N (0)	N	Y
Karatzias et al., 2019	2	Critically Low	Y	Y	Y	N (0)	Y	Y
Öst et al., 2023	4.5	Low	Y	Y	Y	Partial Y (did not search trial/study registries; did not consult experts; did not search for grey literature) (0.5)	Y	Y

Critical Domain (AMSTAR-2)	*PTSD GUP's Critical Domain							
Systematic Review	Total Score of PTSD GUP's Critical Domains (0 [low] - 4 [high])	Overall Confidence Rating (AMSTAR-2)	Included components of PICO	A priori study design	Explained selection of study designs for inclusion	Comprehen-sive litera-ture search*	Duplicate study selection and data extraction	List of excluded studies and justify exclusion
Roberts et al., 2022	2.5	Critically Low	Y	Y	N	Y (1)	Y	N
Sijercic et al., 2022	3	Critically Low	Y	Partial Y (did not preregister review nor provide justification for deviating from protocol)	N	Partial Y (did not search trial registries nor included/ consulted with content experts in the field) (0.5)	N	N
van de Kamp et al., 2023	3.5	Critically Low	Y	Partial Y (Did not preregister protocol)	Y	Partial Y (did not include/ consulted experts, did not search for grey literature) (0.5)	Y	Y
Zhang et al., 2023	3	Critically Low	Y	Partial Y (Did not preregister protocol)	Y	N (0)	Y	N

(continued)	Adequate detail of included studies	Assessed Risk of Bias (RoB) in RCTs*	Assessed RoB in non-RCTs*	Reported sources of funding for studies included in review	Appropriate methods to combine RCT findings (meta-analysis)*	Appropriate methods to combine non-RCT findings (meta-analysis)*	Assessed potential impact of RoB in each study in meta-analysis results	Discussed likely impact of RoB in each study on results of review
Almeida et al., 2024	Y	Y (1)	Y (1)	N	Y (1)	No meta-analysis conducted	Y	Y
Borgogna et al., 2024	Partial Y (did not report study setting)	Y (1)	Includes only RCTs	Y	Y (1)	Includes only RCTs	Y	Y
Choi et al., 2020	Y	Y (1)	Includes only RCTs	N	Y (1)	Includes only RCTs	Y	Y
DeJesus et al., 2024	Y	Y (1)	Partial Y (did not assess RoB in methods used to ascertain exposures and outcomes nor selection of reported result from multiple measures or analyses of a specified outcome) (0.5)	Y	No meta-analysis conducted	No meta-analysis conducted	No meta-analysis conducted	Y
Hoskins et al., 2021	Partial Y (did not report follow-up data)	Y (1)	Includes only RCTs	N	Y (1)	Includes only RCTs	Y	Y
Illingworth et al., 2021	N	Y (1)	Includes only RCTs	N	N (0)	Includes only RCTs	N	N
Jericho et al., 2022	Partial Y (did not describe dosing, study setting, nor follow-up in detail)	Y (1)	Includes only RCTs	N	Y (1)	Includes only RCTs	Y	Y
Karatzias et al., 2019	Y	Y (1)	Includes only RCTs	N	N (0)	Includes only RCTs	Y	Y

(continued)	Adequate detail of included studies	Assessed Risk of Bias (RoB) in RCTs*	Assessed RoB in non-RCTs*	Reported sources of funding for studies included in review	Appropriate methods to combine RCT findings (meta-analysis)*	Appropriate methods to combine non-RCT findings (meta-analysis)*	Assessed potential impact of RoB in each study in meta-analysis results	Discussed likely impact of RoB in each study on results of review
Öst et al., 2023	Y	Y (0.5)	Y (0.5)	N	Y (0.5)	Y (0.5)	Y	Y
Roberts et al., 2022	Y	Partial Y (did not assess allocation sequence that was not truly random) (0.5)	Includes only RCTs	Y	Y (1)	Includes only RCTs	Y	Y
Sijercic et al., 2022	Y	Partial Y (did not assess for biases in outcome reporting) (0.5)	N (0)	N	Y (1)	N (0)	N	N
van de Kamp et al., 2023	Partial Y (did not report study setting)	Y (1)	Includes only RCTs	N	Y (1)	Includes only RCTs	Y	Y
Zhang et al., 2023	Partial Y (did not report study setting)	Y (1)	Includes only RCTs	N	Y (1)	Includes only RCTs	Y	Y

(continued)	Discussed heterogeneity	Likelihood of publication bias assessed*	Conflict of Interest stated
Almeida et al., 2024	Y	N (0)	Y
Borgogna et al., 2024	Y	Y (1)	Y
Choi et al., 2020	N	Y (1)	Y
DeJesus et al., 2024	N	No meta-analysis conducted	Y
Hoskins et al., 2021	N	Y (1)	Y
Illingworth et al., 2021	Y	N (0)	Y
Jericho et al., 2022	Y	Y (1)	Y
Karatzias et al., 2019	N	Y (1)	Y
Öst et al., 2023	Y	Y (1)	Y
Roberts et al., 2022	Y	N (0)	Y
Sijercic et al., 2022	Y	Y (1)	Y
van de Kamp et al., 2023	Y	Y (1)	N
Zhang et al., 2023	N	Y (1)	Y

Note. In addition to reviewing the AMSTAR-2 quality ratings, the Panel then developed its own rating system on a scale of 0 [low] to 4 [high], based on the domains the Panel believed were critical when assessing the quality of the systematic review/meta-analysis.

High (**no or one non-critical weakness**): the systematic review provides an accurate and comprehensive summary of the results of the available studies that address the question of interest.

Moderate (**more than one non-critical weakness***): the systematic review has more than one weakness but no critical flaws. It may provide an accurate summary of the results of the available studies that were included in the review.

Low (**one critical flaw with or without non-critical weaknesses**): the review has a critical flaw and may not provide an accurate and comprehensive summary of the available studies that address the question of interest.

Critically Low (**more than one critical flaw with or without non-critical weaknesses**): the review has more than one critical flaw and should not be relied on to provide an accurate and comprehensive summary of the available studies.

*Multiple non-critical weaknesses may diminish confidence in the review, and it may be appropriate to move the overall appraisal down from moderate to low confidence.

Adapted from:
Shea, B. J., Reeves, B. C., Wells, G., Thuku, M., Hamel, C., Moran, J., Moher, D., Tugwell, P., Welch, V., Kristjansson, E., & Henry, D. A. (2017). AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ, 358*, Article j4008. https://doi.org/10.1136/bmj.j4008

APPENDIX G:

Dose, Timing and Session Duration of Treatments

TABLE G1:

Psychological Interventions

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
Advocacy/Mentoring	12 sessions	Weekly	12 weeks	60
Behavioral Activation for Depression (BATD)	12 sessions	Unavailable	Unavailable	Unavailable
Brief Eclectic Psychotherapy (BEP)	6 to 16 sessions	Weekly	6 to 16 weeks	45 – 60
Cognitive Therapy (CT) ***Conditional For***	16 sessions	Every other week	24 weeks	60
Cognitive-Behavioral Therapy (CBT) ***Strong For***	1 to 24 sessions	Weekly	1 to 24 weeks	33 – 120
Trauma-Focused CBT ***Strong For***	8 to 29 sessions	Weekly to Triweekly	5 to 17 weeks	20 – 120
Cognitive Processing Therapy (CPT) ***Strong For***	4- 24 sessions	Weekly to Biweekly	6 to 18 weeks	30 – 90
Cognitive Restructuring (CR)	10 sessions	Weekly	16 weeks	90
Creating Change	17 sessions	Unavailable	Unavailable	Unavailable
Dialectical Behavior Therapy (DBT)	12 to 23 sessions	Weekly to Biweekly	12 weeks	45 – 90
Dialogical Exposure Therapy (DET)	24 sessions	Weekly	24 weeks	90
Eye-Movement Desensitization and Reprocessing (EMDR) ***Conditional For***	2-24 sessions	Weekly to Biweekly	1-26 weeks	30 – 100
Emotion-Focused (imaginal confrontation)	9 to 10 sessions	Weekly	9 to 15 weeks	90
Exposure-based therapies	7 to 10 sessions	Unavailable	6 weeks	90
Exposure + CR	10 sessions	Weekly	16 weeks	90
Helping to Overcome PTSD through Empowerment (HOPE)	12 sessions	Biweekly	8 weeks	60 – 90

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
Holographic Reprocessing Therapy	10 sessions	Unavailable	Unavailable	Unavailable
Imagery Rehearsal Therapy (IRT)	5 to 6 sessions	Weekly	6 weeks	90
Interpersonal Psychotherapy (IPT)	14 to 16 sessions	Weekly	14 weeks	50 – 120
Memory Specificity Training (MST)	6 sessions	Weekly	6 weeks	90
Metacognitive Therapy (MCT)	8 sessions	Weekly	8 weeks	60
Mindfulness Training	8 sessions	Biweekly	4 weeks	90
Mindfulness-Based Stress Reduction (MBSR)	8 to 9 sessions	Weekly	8 weeks	150
Narrative Exposure Therapy (NET) ***Conditional For***	4 to 17 sessions	Weekly to Biweekly	10 to 17 weeks	60 – 150
Neurofeedback Training	24 sessions	Biweekly	12 weeks	30
Present Centered Therapy (PCT)	10 to 25 sessions	Weekly to Biweekly	11 to 19.5 weeks	50 – 120
Prolonged Exposure (PE) ***Strong For***	9 to 21 sessions	Daily to Weekly to Biweekly	2 to 15 weeks	80 – 120
Prolonged Exposure + (PE+)	8 to 12 sessions	Weekly to Biweekly	5 to 16 weeks	45 – 120
PE + Stress Inoculation Training (PE-SIT)	7 to 9 sessions	Weekly to Biweekly	5 to 7 weeks	90 – 120
Psychodynamic Therapy (PDT)	13 sessions	Weekly	13 weeks	Unavailable
Psychoeducation (PSYED)	1 session	Daily	1 day	45
PTSD Family Education (PFE; Couples)	15 to 36 sessions	Weekly	15 to 36 weeks	60
Relaxation Training	3 to 15 sessions	Weekly to Biweekly	6 to 15 weeks	30 – 90
Seeking Safety (SS)	Unavailable	Unavailable	Unavailable	Unavailable
Skills Training in Affective and Interpersonal Regulation (STAIR)	16 sessions	Weekly to Biweekly	12 weeks	60 – 90
STAIR followed by Prolonged Exposure (STAIR-PE)	16 sessions	Weekly to Biweekly	16 weeks	60 – 90
Stress Inoculation Training (SIT)	9 to 10 sessions	Weekly to Biweekly	5 to 13 weeks	90 – 120
Structured Approach Therapy (SAT)	12 sessions	Weekly	12 weeks	60
Supportive Therapy	4 sessions	Weekly	4 weeks	90 – 120
Trauma Affect Regulation: Guide for Education and Therapy (TAR/TARGET)	8 to 10 sessions	Weekly	9 to 14 weeks	75 – 90

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
Virtual Reality Exposure Therapy (VRET)	4 to 20 sessions	Weekly to Biweekly	10 weeks	45 – 90
Written Exposure Therapy (WET)	3 to 5 sessions	Daily to Weekly	1 to 6 weeks	20 – 60

TABLE G2:
Pharmacological Interventions

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
alprazolam (benzodiazepine) ***Conditional Against***	1.5 to 6 mg	Unavailable	5 weeks	N/a
amitriptyline (tricyclic antidepressant [TCA])	50 to 300 mg	Unavailable	8 weeks	N/a
aripiprazole (antipsychotic)	5mg to 20 mg	Daily	10 weeks	N/a
brofaromine (monoamine oxidase inhibitor [MAOI])	50 to 150 mg	Unavailable	12 to 14 weeks	N/a
bupropion/bupropion sustained release (atypical antidepressant [ATA])	100 to 300 mg	Daily	8 weeks	N/a
carbamazepine (anticonvulsant)	Unavailable	Unavailable	Unavailable	N/a
citalopram (selective serotonin reuptake inhibitor [SSRI])	20 mg to 50 mg	Daily	10 weeks	N/a
desipramine (TCA)	50 to 200 mg	Daily	8 to 12 weeks	N/a
desvenlafaxine (serotonin-norepinephrine reuptake inhibitor [SNRI])	Unavailable	Unavailable	Unavailable	N/a
divalproex (anticonvulsant)	500 to 3000 mg	Daily	8 weeks	N/a
escitalopram (SSRI)	10 to 20 mg	Unavailable	20 weeks	N/a
eszopiclone (hypnotic)	3 mg	Daily	12 weeks	N/a
fluoxetine (SSRI) ***Conditional For***	10 mg to 80 mg	Daily	5 to 12 weeks	N/a
fluvoxamine (SSRI)	150 mg	Daily	8 weeks	N/a

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
ganaxolone (anticonvulsant)	200 to 600 mg	Twice daily	6 weeks	N/a
guanfacine (alpha-2 adrenoceptor agonist)	0.5 mg to 3 mg	Unavailable	8 weeks	N/a
hydroxyzine (antihistamine)	10 mg to 100 mg	Daily	8 weeks	N/a
imipramine (TCA)	50 mg to 300 mg	Unavailable	8 weeks	N/a
inositol (carbohydrate)	12g	Daily	14 weeks	N/a
lamotrigine (anticonvulsant)	25 mg to 500 mg	Daily	8 weeks	N/a
mirtazapine (ATA)	15 mg to 101.5 mg	Daily	6 to 8 weeks	N/a
nefazodone (ATA)	200 mg to 600 mg	Daily	6 to 8 weeks	N/a
nepicastat (dopamine β-hydroxylase inhibitor)	100 mg to 800 mg	Unavailable	6 weeks	N/a
olanzapine (antipsychotic)	5 mg to 20 mg	Daily	1 to 8 weeks	N/a
orvepitant (phenylpiperidine)	60 mg	Daily	12 weeks	N/a
paroxetine (SSRI) ***Conditional For***	20 mg to 62.5 mg	Daily	8 to 12 weeks	N/a
phenelzine (MAOI)	15 mg to 75 mg	Unavailable	8 weeks	N/a
prazosin (alpha-adrenergic blocker)	1 mg to 20 mg	Daily	8 to 26 weeks	N/a
quetiapine (antipsychotic)	25 mg to 800 mg	Daily	12 weeks	N/a
reboxetine (ATA)[22]	8 mg	Daily	8 weeks	N/a
risperidone (antipsychotic)	0.5 mg to 8 mg	Daily	6 to 24 weeks	N/a
sertraline (SSRI) ***Conditional For***	25 mg to 200 mg	Daily	8 to 12 weeks	N/a
tiagabine (anticonvulsant)	2 mg to 16 mg	Daily	12 weeks	N/a
topiramate (anticonvulsant) ***Conditional Against***	12.5 mg to 500 mg	Daily	12 weeks	N/a

22 Reboxetine is not approved for use in the United States (Page, 2003).

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
trazodone (ATA)	50 mg to 150 mg	Daily	8 weeks	N/a
venlafaxine (SNRI) ***Conditional For***	37.5 mg to 375 mg	Daily	12 to 24 weeks	N/a
ziprasidone (antipsychotic)	20 mg to 80 mg	Twice daily	9 weeks	N/a

TABLE G3:
Pharmacological Augmentation Interventions

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
d-cycloserine augmentation (amino acid)	25 mg	Unavailable	Unavailable	Unavailable
eszopiclone augmentation (hypnotic)	3 mg	Daily	12 weeks	Unavailable
prazosin augmentation (alpha-adrenergic blocker)	1 mg to 20 mg	Daily	8 to 26 weeks	Unavailable
risperidone augmentation (antipsychotic)	0.5 mg to 8 mg	Daily	6 to 24 weeks	Unavailable
topiramate augmentation (anticonvulsant)	12.5 mg to 500 mg	Daily	12 weeks	Unavailable

TABLE G4:
Psychedelic Interventions

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
3,4-Methylenedioxymeth-amphetamine (MDMA)-assisted Psychotherapy[23]	30 mg to 150 mg	Weekly	3 to 5 weeks	Unavailable
Ketamine	0.5 mg	Weekly to biweekly	12 days to 14 weeks	40 – 45

23 MDMA-assisted psychotherapy is only available for research purposes or available illegally (Ault & Burton, 2024; Lykos Therapeutics, 2024).

TABLE G5:

Complementary and Integrative Health Interventions

Treatment	Dose Range (No. of sessions or mg)	Timing Range	Duration Range	Session Duration Range, in minutes
Applied Relaxation	12-15 sessions	Weekly	12-15 weeks	60 – 90
Bathysmed® Meditative Diving	10 sessions (dives)	4 days with 2 dives, 2 days with 1 dive	6 days	Unavailable
Exercise (supervised moderate to vigorous; stretching/ toning)	12 sessions	Three times per week	4 weeks	>150
Exercise + TAU	12 sessions	Weekly	Unavailable	30
Cognitively Based Compassionate Training (group)	10 sessions	Weekly	10 weeks	90
Hatha Yoga	16 sessions	Weekly	16 weeks	90
Somatic Experiencing	15 sessions	Unavailable	Unavailable	60
Sudarshan Kriya Yoga	7 sessions	Daily	7 days	180
Sudarshan Kriya Yoga (modified)	5 sessions; then 4.5 sessions and then 6 sessions	Daily then Weekly then Monthly	5 days then once a week and then once a month	180 – 300 then 120
Trauma-Informed Yoga	10 sessions	Weekly	10 weeks	60
Trauma-Sensitive Yoga (group)	10 sessions	Weekly	10 weeks	60
Yoga (group)	20 sessions	Two times per week	10 weeks	90
Yoga Breath Intervention	4 sessions	Daily	4 days	120

Note. TAU = Treatment as Usual.

APPENDIX H

Select Demographic Characteristics of Studies Reviewed from the Systematic Reviews/Meta-Analyses

TABLE H1

Select Demographic Characteristics of Studies Reviewed from the Fifteen Systematic Reviews/Meta-Analyses

		Total	
Study Location		N	%
	United States	221	66
	International	111	33
	Not Reported (NR)	5	1
	TOTAL	337	100
Study Demographics			
Age			
	Reported	319	95
	Early adulthood (ages 18-35)	62	19
	Middle adulthood (ages 36-64)	249	78
	Late adulthood (ages 65 and older)	3	1
	Not Reported (NR)	18	5
	TOTAL	337	100
Gender			
	Reported	319	95
	20%–80% female	150	47
	< 20% female	99	31
	> 80% female	70	22
	Not Reported (NR)	18	5
	TOTAL	337	100
Ethnicity			
	Reported	92	27
	20%–80% Hispanic/Latino/a/e/x	17	18
	< 20% Hispanic/Latino/a/e/x	74	80
	> 80% Hispanic/Latino/a/e/x	1	1
	Not Reported (NR)	245	73
	TOTAL	337	100
Race			
	Reported	208	62
	20%–80% Non-White	118	57
	< 20% Non-White	54	26
	> 80% Non-White	36	17
	Not Reported (NR)	129	38
	TOTAL	337	100

The following tables were developed by APA staff with data pulled from each included individual study across the fifteen systematic reviews/meta-analyses. APA staff also calculated the data that was reported within each individual study to determine the overall representation of the studies.

Hoffman et al. (2018)/Agency for Healthcare Research and Quality

Key Question #1: Cognitive-Behavioral Therapy (CBT) – Cognitive Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Chard, 2005	**Total: 71** G1: 36 G2: 35	United States	Female; Childhood sexual abuse	**Overall: 33**	**Overall: 100%**	**Overall: 3.5%**	**Overall: 8%**
Ehlers, 2003*	**Total: 85** G1: 28 G2: 28 G3: 29	United Kingdom	Male and female; MVA (motor vehicle accident)	**Overall: 39**	**Overall: 72%**	NR	**Overall: 97%**
Ehlers, 2005*	**Total: 20** G1: 14 G2: 14	United Kingdom	Mixed trauma (accident, physical, witness death)	**Overall: 34** G1: 35.4 G2: 37.8	**Overall: 54%** G1: 57% G2: 50%	**Overall: 0%**	**Overall: 0%**
Ehlers, 2014*	**Total: 121** G1: 30 G2: 31 G3: 30 G4: 30	United Kingdom	Chronic PTSD; Mixed trauma	**Overall: 39** G1: 39.7 G2: 41.5 G3: 37.8 G4: 36.8	**Overall: 59%** G1: 60% G2: 58.1% G3: 56.7% G4: 60%	NR	**Overall: 30%** G1: 26.7% G2: 35.5% G3: 26.7% G4: 30%
Forbes, 2012**	**Total: 59** G1: 30 G2: 29	Australia	Male and female military related	**Overall: 53** G1: 53.13 G2: 53.62	**Overall: 3%** G1: 6.7% G2: 0%	NR	**Overall: 0%**
Galovski, 2012**	**Total: 100** G1: 53 G2: 47	United States	Physical/ Sexual Assault (as a child or an adult)	**Overall: 40**	**Overall: 69%**	**Overall: 7%**	**Overall: 58%**
Marks, 1998**; Lovell, 2001	**Total: 81** G1: 23 G2: 13 G3: 24 G4: 21	United Kingdom	Male and female; Mixed trauma	**Overall: 38** G1: 39 G2: 39 G3: 38 G4: 36	**Overall: 36%** G1: 39.1% G2: 32% G3: 25% G4: 48%	NR	NR
Maxwell, 2016	**Total: 16** G1: 8 G2: 8	United States	Male and female mixed	NR	**Overall: 81%**	**Overall: 13%**	**Overall: 31%**
Monson, 2006**	Total: 60 G1: 30 G2: 30	United States	Male and Female combat veterans	Overall: 54 G1: 54.9 G2: 53.1	Overall: 10% G1: 6.7% G2: 13.3%	NR	Overall: 6.7% G1: 6.7% G2: 6.7%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Mueser, 2008**	**Total: 108** G1: 54 G2: 54	United States	Male and female; mixed trauma	**Overall: 44** G1: 45 G2: 43	**Overall: 79%** G1: 76% G2: 81%	NR	**Overall: 16%** G1: 15% G2: 16.7%
Resick 2002; Resick, 2003; Resick, 2012	**Total: 171** G1: 63 G2: 63 G3: 63	United States	Female sexual assault	**Overall: 32**	**Overall: 100%**	**Overall: 1.20%**	**Overall: 28%**
Resick, 2015	**Total: 108** G1: 52 G2: 56	United States	Military trauma (could also have PTSD based on other previous trauma)	**Overall: 32** G1: 31.8 G2: 32.4	**Overall: 7%** G1: 7.1% G2: 7.7%	**Overall: 14%** G1: 9% G2: 19%	**Overall: 29%** *Black:* Overall: 20.4% G1: 20% G2: 21% *Other:* Overall: 8.3% G1: 9% G2: 8%
Tarrier, 1999	**Total: 72** G1: 35 G2: 37	United Kingdom	Male and female; mixed trauma	**Overall: 39**	**Overall: 42%**	NR	NR
Wells, 2014	**Total:** G1: 11 G2: 11 G3: 10	United Kingdom	Mixed trauma	**Overall: 41.2** G1: 40.6 G2: 40.5 G3: 42.7	**Overall: 38%** G1: 36.4% G2: 36.4% G3: 40%	NR	NR

Note. G – Group; NR – Not reported. *Also cited in Jericho et al. (2022) and Karatzias et al. (2019) reviews. **Also cited in Karatzias et al. (2019) and Roberts et al. (2022) reviews.

Key Question #1: CBT – Coping Skills

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Carlson, 1998	**Total: 35** G1: 13 G2: 10 G3: 12	United States	Male Vietnam Combat Veterans	**Overall: 46.2** G1: 46.9 G2: 52.7 G3: 45.4	**Overall: 0%**	NR	**Overall: 45.7%** G1: 46.2% G2: 40% G3: 50%
Foa 1999**; Zoellner 1999	**Total: 96**	United States	Female Assault	**Overall: 35**	**Overall: 100%**	NR	**Overall: 36%**
Markowitz, 2015; Markowitz, 2016	**Total: 110** G1: 38 G2: 40 G3: 32	United States	Chronic PTSD; Mixed trauma	**Overall: 40.10** G1: 41.76 G2: 38.12 G3: 40.62	**Overall: 70%** G1: 55% G2: 70% G3: 88%	**Overall: 28%** G1: 32% G2: 20% G3: 34%	**Overall: 34.5%** *African American*: Overall: 17% G1: 24% G2: 10% G3: 19% *Asian/Pacific Islander:* **Overall: 8%** G1: 5% G2: 8% G3: 13% *Other:* **Overall: 9%** G1: 13% G2: 5% G3: 9%
Marks 1998; Lovell 2011	**Total: 81** G1: 23 G2: 13 G3: 24 G4: 21	United Kingdom	Male and female; Mixed trauma	**Overall: 38** G1: 39 G2: 39 G3: 38 G4: 36	**Overall: 36%** G1: 39.1% G2: 32% G3: 25% G4: 48%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Sautter, 2015*	**Total: 114 (57 couples)** G1: 58 (*29 couples*) G2: 56 (*28 couples*)	United States	U.S. combat Veterans and their partners	**Overall: 32.67** Veteran*:* G1: 32.55 G2: 33.71 Partner*:* G1: 32.17 G2: 32.25	**Overall: 50%** Veteran: Overall: 1.75% G1: 0% G2: 1.75% Partner: Overall: 98.25% G1: 100% G2: 96.43%	**Overall: 7.21%** Veteran*:* Overall: 3.57% G1: 6.9% G2: 0% Partner*:* Overall: 3.64% G1: 0% G2: 7.14%	**Overall: 50.5%** Veteran: Overall: 30.5% *American Indian/Alaska Native:* Overall: 3.57% G1: 0% G2: 7.41% *Asian/Pacific Islander:* Overall: 3.57% G1: 0% G2: 7.41% *Black/African American*: Overall: 23.31% G1: 13.79% G2: 33.33% Partner: Overall: 20% *American Indian/Alaska Native*: Overall: 1.82% G1: 3.70% G2: 0% *Black/African American:* Overall: 18.18% G1: 7.41% G2: 28.57%
Taylor 2003	**Total: 60**	Canada	Male and Female; mixed trauma	**Overall: 37**	**Overall: 75%**	NR	**Overall: 23.33%**

Note. G – Group; NR – Not reported; *Also cited in Sijercic et al. (2022) review. *Also cited in Karatzias et al. (2019) review.

Key Question #1: CBT – Exposure

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Asukai, 2010	**Total: 24** G1: 12 G2: 12	Japan	Mixed trauma	**Overall: 29** G1: G2:	**Overall: 88%** G1: G2:	NR	100%
Başoğlu, 2007***	**Total: 31** G1: 16 G2: 15	Turkey	Male and Female; Natural disaster	**Overall: 34**	**Overall: 87%**	NR	NR
Bryant, 2003	**Total: 58** G1: 20 G2: 20 G3: 18	Australia	Male and Female; mixed trauma	**Overall: 35** G1: 37.05 G2: 32.35 G3: 36.28	**Overall: 52%**	NR	NR
Bryant, 2008	**Total: 118** G1: 31 G2: 28 G3: 31 G4: 28	Australia	Male and Female; mixed trauma	**Overall: 37** G1: 39.13 G2: 40.92 G3: 35.85 G4: 33.75	NR	NR	Overall: 8%
Coffey, 2016	**Total: 126** G1: 45 G2: 40 G3: 41	United States	Mixed trauma (combat related trauma excluded)	**Overall: 34** G1: 34.7 G2: 34.4 G3: 32.9	**Overall: 46%** G1: 42.2% G2: 45% G3: 51.2%	NR	**Overall: 21%** *Black/African American:* Overall: 19% G1: 22.2% G2: 17.5% G3: 17.1% *Other:* Overall: 2% G1: 0% G2: 5% G3: 0%
Foa 1999***; Zoellner 1999	**Total: 96**	United States	Female Assault	**Overall: 35**	**Overall: 100%**	NR	**Overall: 36%**
Foa, 2005*	**Total: 179** G1: 74 G2: 79 G3: 26	United States	Female Assault	**Overall: 35**	**Overall: 100%**	NR	**Overall: 52%** *African American:* Overall: 44% *Other:* Overall: 7.5%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Fonzo, 2017a; Fonzo, 2017b	**Total: 66** G1: 36 G2: 30	NR	Male and Female; mixed trauma	**Overall: 37**	**Overall: 65%**	NR	NR
Gamito, 2010	**Total: 10** G1: 5 G2: 2 G3: 3	Portugal	Male combat Veterans	**Overall: 63.50**	**Overall: 0%**	NR	NR
Langkaas, 2017	**Total: 65** G1: 31 G2: 34	Norway	Male and Female; mixed trauma	**Overall: 45**	**Overall: 58%**	NR	NR
Markowitz, 2015; Markowitz, 2016	**Total: 110** G1: 38 G2: 40 G3: 32	United States	Chronic PTSD; Mixed trauma	**Overall: 40.10** G1: 41.76 G2: 38.12 G3: 40.62	**Overall: 70%** G1: 55% G2: 70% G3: 88%	**Overall: 28%** G1: 32% G2: 20% G3: 34%	**Overall: 34.5%** *African American*: Overall: 17% G1: 24% G2: 10% G3: 19% *Asian/Pacific Islander:* Overall: 8% G1: 5% G2: 8% G3: 13% *Other:* Overall: 9% G1: 13% G2: 5% G3: 9%
Marks, 1998***; Lovell, 2011	**Total: 81** G1: 23 G2: 13 G3: 24 G4: 21	United Kingdom	Male and female; Mixed trauma	**Overall: 38** G1: 39 G2: 39 G3: 38 G4: 36	**Overall: 36%** G1: 39.1% G2: 32% G3: 25% G4: 48%	NR	NR
Mills, 2012	**Total: 103** G1: 55 G2: 48	Australia	Mixed trauma	**Overall: 34** G1: 33.4 G2: 33.5	**Overall: 62%** G1: 60% G2: 64.6%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Nacasch, 2011	**Total: 30** G1: 15 G2: 15	Israel	Male and Female; Combat trauma	**Overall: 34** G1: 33.7 G2: 34.8	NR	NR	**Overall: 100%**
Reger, 2016	**Total: 162** G1: 54 G2: 54 G3: 54	United States	Active-duty military	**Overall: 30** G1: 30.89 G2: 29.52 G3: 30.39	**Overall: 4%** G1: 6% G2: 3.70% G3: 1.85%	**Overall: 17%** G1: 22.22% G2: 12.96% G3: 16.67%	**Overall: 23%** *Black, not Hispanic:* Overall: 9.26% G1: 9.26% G2: 3.70% G3: 14.81% *Asian/Pacific Islander, not Hispanic:* Overall: 6.17% G1: 5.56% G2: 7.41% G3: 5.56% *Alaskan Indian/ American Native, not Hispanic:* Overall: 3.09% G1: 1.85% G2: 1.85% G3: 5.56% *Other, not Hispanic*: Overall: 4.32% G1: 5.56% G2: 1.85% G3: 5.56%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Resick, 2002*; Resick, 2003; Resick, 2012	**Total: 171** G1: 63 G2: 63 G3: 44	United States	Female sexual assault	**Overall: 32**	**Overall: 100%**	**Overall: 1.2%**	**Overall: 28%** **African American:** **Overall: 25.1%** **Asian:** **Overall: 0.6%** **Native American:** **Overall: 1.2%** **Other:** **Overall: 1.2%**
Rothbaum, 2005	**Total: 74** G1: 24 G2: 26 G3: 24	United States	Female sexual assault	**Overall: 34**	**Overall: 100%**	NR	**Overall: 32%**
Ruglass, 2017	**Total: 110** G1: 39 G2: 43 G3: 28	United States	Male and Female; mixed trauma (65% with clinical PTSD)	**Overall: 44** G1: 43.08 G2: 44.21 G3: 47.18	**Overall: 36%** G1: 28.2% G2: 37.2% G3: 46.4%	**Overall: 20%** G1: 25.6% G2: 20.9% G3: 10.7%	**Overall: 61.8%** *Black/African American:* Overall: 59.1% G1: 53.8% G2: 65.1% G3: 57.1% *Other:* Overall: 2.7% G1: 5.1% G2: 0% G3: 3.6%
Schnurr, 2003	**Total: 325** G1: 162 G2: 163	United States	Male combat	**Overall: 50.7** G1: 50.6 G2: 50.8	**Overall: 0%**	NR	**Overall: 34%** G1: 32.7% G2: 35%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Schnurr, 2007*	**Total: 284** G1: 141 G2: 143	United States	Female Combat	**Overall: 45** G1: 44.6 G2: 44.9	**Overall: 100%**	**Overall: 6%** G1: 5.7% G2: 6.3%	**Overall: 39.4%** *Black, non-Hispanic:* Overall: 32.7% G1: 33.3% G2: 32.2% *Other:* 6.7% Overall: 6.7% G1: 5% G2: 8.4%
Sloan, 2012**	**Total: 46** G1: 22 G2: 24	United States	Motor Vehicle Accident (MVA)	**Overall: 41**	**Overall: 65%**	**Overall: 8%**	**Overall: 55%** *African American:* Overall: 37% *Asian American:* Overall: 4% *Mixed Racial Background:* Overall: 14%
Tarrier, 1999	**Overall: 72** G1: 35 G2: 37	United Kingdom	Male and female; mixed trauma	**Overall: 39**	**Overall: 42%**	NR	NR
Taylor, 2003	**Overall: 60** G1: 19 G2: 19 G3: 22	Canada	Male and Female; mixed trauma	**Overall: 38**	**Overall 75%**	NR	**Overall: 23%**
van den Berg, 2015***	**Overall: 155** G1: 53 G2: 55 G3: 47	United States	Psychotic disorder and PTSD; mixed trauma	**Overall: 41.2** G1: 42.6 G2: 40.4 G3: 40.3	**Overall: 54.2%** G1: 56.7% G2: 54.6% G3: 51.1%	NR	NR
Wells, 2014	**Overall: 32** G1: 11 G2: 11 G3: 10	United Kingdom	Mixed trauma	**Overall: 41** G1: 40.6 G2: 40.5 G3: 42.7	**Overall: 38%** G1: 63.6% G2: 63.6% G3: 60%	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Choi et al. (2020), Karatzias et al. (2019), and Jericho et al. (2022) reviews; **Also cited in Choi et al. (2020) and DeJesus et al. (2024) reviews. ***Also cited in Karatzias et al. (2019) review.

Key Question #1: CBT – Mixed Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Acosta, 2017	**Total: 162** G1: 81 G2: 81	United States	Combat veterans with PTSD and substance use [79% of sample had clinical PTSD]	**Overall: 34**	**Overall: 7**	NR	**Overall: 13%**
Blanchard, 2003	**Total: 78** G1: 27 G2: 27 G3: 24	United States	Male and female, motor vehicle accident, 83% of sample had clinical PTSD	**Overall: 41.1** G1: 40.6 G2: 40.6 G3: 42.1	**Overall: 26.92%** G1: 22.22% G2: 22.22% G3: 38%	NR	**Overall: 7.69%** G1: 3.70% G2: 7.41% G3: 12.5%
Bohus, 2013	**Total: 82** G1: 43 G2: 39	Germany	Child abuse survivors with and without borderline personality disorder	**Overall: 36**	**Overall: 100%**	NR	NR
Bryant, 2003	**Total: 58** G1: 20 G2: 20 G3: 18	Australia	Male and Female; mixed trauma	**Overall: 35** G1: 37.05 G2: 32.35 G3: 36.28	**Overall: 52%**	NR	NR
Bryant, 2008	**Total: 118** G1: 31 G2: 28 G3: 31 G4: 28	Australia	Male and Female; mixed trauma	**Overall: 37** G1: 39.13 G2: 40.92 G3: 35.85 G4: 33.75	NR	NR	**Overall: 8%**
Cloitre, 2002*	**Total: 58** G1: 31 G2: 27	United States	Female childhood abuse	**Overall: 34**	**Overall: 100%**	**Overall: 15%**	**Overall: 39%** *African American:* Overall: 20% *Other (Asian, Caribbean, and American Indian):* Overall: 19%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Cloitre, 2010; Cloitre, 2016	**Overall: 104** G1: 33 G2: 38 G3: 33	United States	Female; mixed trauma (childhood abuse)	**Overall: 36** G1: 33.2 G2: 37.1 G3: 38.7	**Overall: 100%**	**Overall: 26%** G1: 30% G2: 29% G3: 18%	**Overall: 38%** *African American, non-Hispanic:* Overall: 28% G1: 24% G2: 21% G3: 39% *Other:* Overall: 9.67% G1: 9% G2: 11% G3: 9%
Cottraux, 2008	**Overall: 60** G1: 31 G2: 29	France	Male and Female mixed	**Overall: 39** G1: 43.18 G2: 37.20	**Overall: 70%**	NR	NR
Engel, 2015	**Overall: 80** G1: 43 G2: 37	United States	Veterans of recent military conflicts PTSD	**Overall: 36** G1: 36.7 G2: 36.2	**Overall: 19%** G1: 16.2% G2: 20.9%	NR	**Overall: 45%**
Fecteau, 1999	**Overall: 43**	Canada	Male and female, motor vehicle accident	**Overall: 41**	**Overall: 70%**	NR	NR
Foa 1999***; Zoellner 1999	**Total: 96**	United States	Female Assault	**Overall: 35**	**Overall: 100%**	NR	**Overall: 36%**
Foa, 2005*	**Total: 179** G1: 74 G2: 79 G3: 26	United States	Female Assault	**Overall: 35**	**Overall: 100%**	NR	**Overall: 51%** *African American:* G1:

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Haller, 2016	**Overall: 123** G1: 61 G2: 62	United States	Veterans with MDD or dysthymia, past 90-day alcohol, cannabinoid, or stimulant dependence, and trauma exposure 82.1% of sample had clinical PTSD	**Overall: 47** G1: 47.20 G2: 47.32	**Overall: 11%** G1: 9.8% G2: 12.9%	**Overall: 16.2%** G1: 14.7% G2: 17.7%	**Overall: 20%** *African American:* Overall: 9.8% G1: 9.8% G2: 9.7% *Asian or Pacific Islander:* Overall: 4.9% G1: 4.9% G2: 4.8% *Other:* Overall: 4.8% G1: 4.9% G2: 4.8%
Harned, 2014***	**Overall: 26** G1: 7 G2: 19	United States	PTSD with borderline personality disorder and intentional self-injury	**Overall: 33**	**Overall: 100%**	NR	**Overall: 19.2%** *Biracial:* Overall: 15.4% *Asian-American:* Overall: 3.8%
Hinton, 2005	**Overall: 40** G1: 20 G2: 20	United States	Male and Female Cambodian refugees	**Overall: 52** G1: 50.90 G2: 52.70	**Overall: 60%** G1: 60% G2: 60%	NR	**Overall: 100%**
Hinton, 2009***	**Overall: 24** G1: 12 G2: 12	United States	Cambodian refugees witnessed genocide	**Overall: 50** G1: 49.02 G2: 49.08	**Overall: 60%** G1: 60% G2: 60%	NR	**Overall: 100%**
Hinton, 2011***	**Overall: 24** G1: 12 G2: 12	United States	Female, trauma type NR	**Overall: 50**	**Overall: 100%**	**Overall: 100%**	**Overall: 100%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Hollifield, 2007***	**Overall: 55** G1: 28 G2: 27	United States	Male and female; Mixed trauma	**Overall: 42** G1: 40.9 G2: 43.4	**Overall: 80%** G1: 79% G2: 63%	**Overall: 22%** G1: 7.14% G2: 37%	**Overall: 11.1%** *African American:* Overall: 3.7% G1: 0% G2: 3.7% *Other:* Overall: 7.4% G1: 0% G2: 7.4%
Ivarsson, 2014	**Overall: 62%** G1: 31 G2: 31	Sweden	Chronic PTSD; Mixed trauma	**Overall: 46** G1: 44.8 G2: 47.2	**Overall: 82%** G1: 77.4% G2: 87.1%	NR	NR
Johnson, 2011	**Overall: 70** G1: 35 G2: 35	United States	Female interpersonal violence (87% of sample had clinical PTSD)	**Overall: 33** G1: 31.74 G2: 33.34	**Overall: 100%**	**Overall: 4.3%** G1: 2.9% G2: 5.7%	**Overall: 57.1%** *African American:* Overall: 50% G1: 48.6% G2: 51.4% *Other race:* Overall: 7.1% G1: 2.9% G2: 5.7%
Kubany, 2003***	**Overall: 37** G1: 19 G2: 18	United States	Female interpersonal violence	**Overall: 36**	**Overall: 100%**	NR	**Overall: 51%** *Asian:* Overall: 27% *Pacific Islander:* Overall: 16% *Other (Black and Puerto Rican):* Overall: 8%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Kubany, 2004***	**Overall: 125** G1: 63 G2: 62	United States	Female interpersonal violence	**Overall: 42**	**Overall: 100%**	NR	**Overall: 48%** *Native Hawaiian:* Overall: 9% *Filipino:* Overall: 7% *Japanese:* Overall: 6% *Black:* Overall: 5% *Samoan:* Overall: 5% *American Indian:* Overall: 2% *Other:* Overall: 14%
Litz, 2007	**Overall: 45** G1: 24 G2: 21	United States	Male and female combat	**Overall: 38**	**Overall: 22%**	NR	**Overall: 30%**
Maguen, 2017	**Overall: 33** G1: 17 G2: 16	United States	Endorsed killing or for the death of another in a war zone, PTSD	**Overall: 61** G1: 61.2 G2: 61.1	**Overall: 0%**	**Overall: 3%** G1: 5.9% G2: 0%	**Overall: 36.3%** *Asian:* Overall: 3% G1: 5.9% G2: 0% *Black:* Overall: 21.2% G1: 23.5% G2: 18.8% *Multiracial:* Overall: 12.1% G1: 17.6% G2: 6.3%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Marks, 1998***; Lovell, 2011	**Total: 81** G1: 23 G2: 13 G3: 24 G4: 21	United Kingdom	Male and female; Mixed trauma	**Overall: 38** G1: 39 G2: 39 G3: 38 G4: 36	**Overall: 36%** G1: 39.1% G2: 32% G3: 25% G4: 48%	NR	NR
McDonagh, 2005*&***	**Overall: 74** G1: 29 G2: 22 G3: 23	United States	Female childhood sexual abuse	**Overall: 40** G1: 39.8 G2: 39.6 G3: 42	**Overall: 100%**	NR	**Overall: 19%** *African American:* Overall: 5% G1: 0% G2: 5% G3: 0% *Native American:* Overall: 10% G1: 10% G2: 0% G3: 0% *Other:* Overall: 4% G1: 0% G2: 0% G3: 4%
McGovern, 2015	**Overall: 221** G1: 73 G2: 75 G3: 73	United States	PTSD and substance abuse	**Overall: 35** G1: 36.22 G2: 35.82 G3: 33.86	**Overall: 59%** G1: 62% G2: 59% G3: 58%	NR	**Overall: 4%**
Monson, 2012**	**Overall: 80 (40 couples)** G1: 40 (*20 couples*) G2: 40 (*20 couples*)	Canada	Veterans and their partners	**Overall: 37.4** Veterans: Overall: 37.1 G1: 40.4 G2: 33.8 Partners: Overall: 37.8 G1: 40.7 G2: 34.9	**Overall: 54%** Veterans: Overall: 75% G1: 65% G2: 85% Partners: Overall: 32.5% G1: 50% G2: 15%	NR	**Overall: 47.5%** Veterans: Overall: 27.5% G1: 25% G2: 30% Partners: Overall: 20% G1: 20% G2: 20%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Sannibale, 2013	**Overall: 62** G1: 33 G2: 29	Australia	Comorbid PTSD and Alcohol Use Disorder	**Overall: 41** G1: 41.85 G2: 40.41	**Overall: 53%** G1: 42% G2: 48%	NR	NR
Spence, 2011	**Overall: 42** G1: 23 G2: 21	Australia	Male and Female mixed	**Overall: 43** G1: 43 G2: 42	**Overall: 81%** G1: 74% G2: 89%	NR	NR
van Emmerik, 2008	**Overall: 125** G1: 41 G2: 44 G3: 40	The Netherlands	Male and Female; mixed trauma (97% of sample has clinical PTSD)	**Overall: 40** G1: 38.76 G2: 42.84 G3: 38.87	**Overall: 67%** G1: 63.4% G2: 65.9% G3: 72.5%	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Choi et al. (2020), Karatzias et al. (2019), and Jericho et al. (2022) reviews; **Also cited in Sijercic et al. (2022) review. ***Also cited in Karatzias et al. (2019) review.

Key Question #1: Eye-Movement Desensitization and Reprocessing (EMDR)

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Acarturk, 2016	**Total: 98** G1: 49 G2: 49	Turkish-Syria Border	Refugees	**Overall: 34** G1: 33.32 G2: 34.04	**Overall: 74%** G1: 79.2% G2: 68.7%	NR	**Overall: 100%**
Carlson, 1998	**Total: 35** G1: 13 G2: 10 G3: 12	United States	Male Vietnam combat veterans	**Overall: 46.2** G1: 46.9 G2: 52.7 G3: 45.4	**Overall: 0%**	NR	**Overall: 45.4%** G1: 46.2% G2: 40% G3: 50%
Högberg, 2007**	**Total: 24** G1: 13 G2: 11	Sweden	Swedish public transportation employees	**Overall: 43** G1: 43 G2: 43	**Overall: 21%** G1: 23.1% G2: 18.2%	NR	NR
Nijdam, 2012**	**Total: 140** G1: 70 G2: 70	The Netherlands	Male and Female; mixed trauma	**Overall: 38** G1: 37.3 G2: 38.3	**Overall: 56%** G1: 61.4% G2: 51.4%	NR	**Overall: 100%**
Rothbaum, 1997	**Total: 21** G1: G3:	United States	Female, sexual assault	**Overall: 35** G1: G3:	**Overall: 100%** G1: G3:	NR	NR
Rothbaum, 2005	**Total: 74** G1: 24 G2: 26 G3: 24	United States	Female sexual assault	**Overall: 34**	**Overall: 100%**	NR	**Overall: 32%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Taylor, 2003	**Total: 60** G1: 19 G2: 19 G3: 22	Canada	Male and Female; mixed trauma	**Overall: 38**	**Overall 75%**	NR	**Overall: 23%**
ter Heide, 2016**	**Total: 74** G1: 37 G2: 37	Germany	Refugees	**Overall: 41** G1: 43 G2: 40	**Overall: 28%** G1: 16.7% G2: 38.9%	NR	NR
van den Berg, 2015**	**Total: 155** G1: 53 G2: 55 G3: 47	United States	Psychotic disorder and PTSD; mixed trauma	**Overall: 41.2** G1: 42.6 G2: 40.4 G3: 40.3	**Overall: 54.2%** G1: 56.7% G2: 54.6% G3: 51.1%	NR	NR
van der Kolk, 2007*	**Total: 88** G1: 29 G2: 30 G3: 29	United States	Male and female; Child-onset and adult-onset trauma	**Overall: 36.1** G1: 38.7 G2: 34.1 G3: 35.7	**Overall: 83%** G1: 75.9% G2: 86.7% G3: 86.2%	NR	**Overall: 33%**

Note. G – Group; NR – Not Reported; *Also cited in Hoskins et al. (2021) review. **Also cited in Karatzias et al. (2019) review.

Key Question #1: Other Psychological Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Boden, 2012	**Total: 117** G1: 59 G2: 58	United States	Male Combat 92% of sample had clinical PTSD	**Overall: 54** G1: 55.1 G2: 52.9	**Overall: 0%**	**Overall: 7.15%** G1: 8.2% G2: 6.1%	**Overall: 69.4%** *African American:* Overall: 60.2% G1: 65.3% G2: 55.1% *Native American:* Overall: 4.1% G1: 4.1% G2: 0% *Other:* Overall: 5.1% G1: 4.1% G2: 6.1%
Church, 2013	**Total: 59** G1: 30 G2: 29	United States	U.S. Combat Veterans	**Overall: 52** G1: 49.4 G2: 54.1	**Overall: 10%** G1: 6.7% G2: 13.8%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Cook, 2010	**Total: 124** G1: 61 G2: 63	United States	Male Combat Veterans	**Overall: 59** G1: 59.79 G2: 59.06	**Overall: 0%**	NR	**Overall: 58%** *African American:* Overall: 51.6% G1: 49.2% G2: 54% *Other:* Overall: 6.4% G1: 6.6% G2: 6.4%
Ford, 2011**	**Total: 146** G1: 48 G2: 53	United States	Female Victimization or incarceration; 80% of sample had clinical PTSD	**Overall: 31**	**Overall: 100%**	**Overall: 18%**	**Overall: 41%** *African American:* Overall: 40% *Other:* Overall: 1%
Ford, 2013	**Total: 72** G1: 38 G2: 34	United States	Incarcerated women of interpersonal violence; 78% of sample had clinical PTSD	**Overall: 36.3** G1: 34.6 G2: 38	**Overall: 100%**	**Overall: 13%** G1: 8% G2: 18%	**Overall: 30%** G1: 30% G2: 29%
Gersons, 2000	**Total: 42** G1: 22 G2: 20	The Netherlands	Male and female police officers Trauma type NR	**Overall: 37** G1: 35 G2: 38	**Overall: 12%** G1: 18% G2: 5%	NR	NR
Hien, 2004	**Total: 107** G1: 41 G2: 34 G3: 32	United States	Female; Mixed trauma w/ substance abuse disorders (80% of sample had clinical PTSD)	**Overall: 37** G1: 38.2 G2: 33.8 G3: 39.7	**Overall: 100%**	**Overall: 19.3%** G1: 24.4% G2: 14.7% G3: 18.8%	**Overall: 44.4%** *African American:* Overall: 42% G1: 48.8% G2: 35.3% G3: 40.6% *Other:* Overall: 2.4% G1: 2.4% G2: 0% G3: 0%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Hien, 2009; Hien, 2012	**Total: 353** G1: 176 G2: 177	United States	Female; Mixed trauma (88% of sample had clinical PTSD)	**Overall: 39.2** G1: 39.3 G2: 39	**Overall: 100%**	**Overall: 6.5%** G1: 3.98% G2: 9%	**Overall: 47.9%** *African American/ Black:* Overall: 34% G1: 33% G2: 35% *Multiracial:* Overall: 13.3% G1: 15.34% G2: 11.3% *Other:* Overall: 0.6% G1: 0.6% G2: 0.6%
Kearney, 2013	**Total: 47** G1: 25 G2: 22	United States	War Veterans; Mixed trauma	**Overall: 52** G1: 52 G2: 52	**Overall: 21%** G1: 20% G2: 23%	**Overall: 14%** G1: 0% G2: 14%	**Overall: 31.1%** *African American:* Overall: 15% G1: 20% G2: 9.1% *Asian/Pacific Islander/Native American:* Overall: 13.6% G1: 0% G2: 13.6% *Other:* Overall: 2.5% G1: 4% G2: 4.5%
Krakow, 2001**	**Total: 168** G1: 80 G2: 88	United States	Female sexual abuse/assault	**Overall: 37** G1: 34 G2: 39	**Overall: 100%**	NR	**Overall: 21%**
Langkaas, 2017	**Total: 65** G1: 31 G2: 34	Norway	Male and Female; mixed trauma	**Overall: 45**	**Overall: 58%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Lindauer, 2005**	**Total: 24** G1: 12 G2: 12	United States	Male and Female; mixed trauma	**Overall: 34** G1: 37.6 G2: 40.3	**Overall: 54%** G1: 41.7% G2: 66.7%	NR	NR
Markowitz, 2015; Markowitz, 2016	**Total: 110** G1: 38 G2: 40 G3: 32	United States	Chronic PTSD; Mixed trauma	**Overall: 40.10** G1: 41.76 G2: 38.12 G3: 40.62	**Overall: 70%** G1: 55% G2: 70% G3: 88%	**Overall: 28%** G1: 32% G2: 20% G3: 34%	**Overall: 34.5%** *African American*: Overall: 17% G1: 24% G2: 10% G3: 19% *Asian/Pacific Islander:* Overall: 8% G1: 5% G2: 8% G3: 13% *Other:* Overall: 9% G1: 13% G2: 5% G3: 9%
Maxwell, 2016	**Total: 16**	United States	Male and female; mixed trauma	NR	**Overall: 81%**	**Overall: 13%**	**Overall: 31%** *African American:* Overall: 19% *Other:* Overall: 12%
Moradi, 2014	**Total: 24** G1: 12 G2: 12	Iran	Iranian Combat male veterans	**Overall: 45** G1: 45.26 G2: 45.33	**Overall: 0%**	NR	**Overall: 100%**
Morath, 2014	**Total: 34** G1: 17 G2: 17	Germany	Refugees and Asylum seekers	**Overall: 28**	**Overall: 41%**	NR	**Overall: 100%**
Neuner, 2004	**Total: 43** G1: 17 G2: 14 G3: 12	Sudan	Male and female Sudanese refugees	**Overall: 33** G1: 31.9 G2: 33.8 G3: 34.2	**Overall: 62%** G1: 53.3% G2: 57.1% G3: 75%	NR	**Overall: 100%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Neuner, 2008	**Total: 277** G1: 111 G2: 111 G3: 55	Somalia	Male and female Rwandan and Somalian refugees	**Overall: 32** G1: 34.3 G2: 35.2 G3: 35.6	**Overall: 51%** G1: 50.5% G2: 53.2% G3: 49%	NR	**Overall: 100%**
Neuner, 2010*	**Total: 32** G1: 16 G2: 15	Germany	Male and female Asylum seekers	**Overall: 31** G1: 31.6 G2: 31.1	**Overall: 31%** G1: 31.2% G2: 31.2%	NR	NR
Nijdam, 2012**	**Total: 140** G1: 70 G2: 70	The Netherlands	Male and Female; mixed trauma	**Overall: 38** G1: 37.3 G2: 38.3	**Overall: 56%** G1: 61.4% G2: 51.4%	NR	**Overall: 100%**
Polusny, 2014	**Total: 116** G1: 58 G2: 58	United States	War Veterans; Mixed trauma	**Overall: 59** G1: 57.6 G2: 59.4	**Overall: 16%** G1: 21% G2: 10%	NR	**Overall: 16%** *African American:* Overall: 8% *Mixed:* Overall: 5% *Other:* Overall: 3%
Schnyder, 2011	**Total: 30** G1: 16 G2: 14	Germany	Male and female; Mixed trauma (96% of sample had clinical PTSD)	**Overall: 40**	**Overall: 47%**	NR	NR
van der Kolk, 2016	**Total: 52** G1: 28 G2: 24	United States	Mixed trauma	**Overall: 44** G1: 46.04 G2: 42.25	**Overall: 76%** G1: 92.6% G2: 77.3%	NR	**Overall: 24.2%** *African American:* Overall: 9% *Native American:* Overall: 2.2% *Multi-Ethnic:* Overall: 8.7% *Other:* Overall: 4.3%
Zlotnick, 2009	**Total: 49** G1: 27 G2: 22	United States	Female; Mixed trauma (83% of sample had clinical PTSD)	**Overall: 35**	**Overall: 100%**	**Overall: 14%**	**Overall: 39%** *African American:* Overall: 32.7% *Other:* Overall: 6.1%

Note. G – Group; NR – Not reported; *Also cited in Choi et al. (2020) and Jericho et al. (2022) reviews. **Also cited in Karatzias et al. (2019) review.

Key Question #2: Alpha-Blockers

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Raskind, 2003*	**Total: 10** G1: 5 G2: 5	United States	Male Combat Veterans	**Overall: 53** G1: G2:	**Overall: 0%**	NR	NR
Raskind, 2007*	**Total: 40** G1: 20 G2: 20	United States	Male and female Combat Veterans	**Overall: 56**	**Overall: 5%**	**Overall: 3%**	**Overall: 34%** *African American:* Overall: 28% *Asian American:* 3% *Native American:* 3%
Raskind, 2013*	**Total: 67** G1: 32 G2: 35	United States	Veterans Active-duty soldiers, Combat trauma	**Overall: 30** G1: 30 G2: 30.8	**Overall: 15%** G1: 18.75% G2: 11.4%	**Overall: 11.9%** G1: 16% G2: 9%	**Overall: 25.4%** *African American:* Overall: 13.4% G1: 13% G2: 14% *Asian:* Overall: 1.5% G1: 3% G2: 0% *Native American*: Overall: 3% G1: 0% G2: 6% *Other:* Overall: 7.5% G1: 3% G2: 11%

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #2: Anticonvulsants/Mood Stabilizers

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Akuchekian, 2004	**Total: 67**	Iran	Male Combat Veterans	**Overall: 40**	**Overall: 0%**	NR	**Overall: 100%**
Batki, 2014*	**Total: 30** G1: 14 G2: 16	United States	Veterans w/ AUD and/or civilian related trauma	**Overall: 50** G1: 49.5 G2: 50.4	**Overall: 7%** G1: 7% G2: 6.3%	**Overall: 7%** G1: 14.3% G2: 0%	**Overall: 47%** *American Indian/Alaska Native:* Overall: 3.3% G1: 7% G2: 0% *Asian:* Overall: 6.7% G1: 7% G2: 6.3% *African American:* Overall: 23.3% G1: 14.3% G2: 31.3% *Pacific Island Native:* Overall: 3.3% G1: 0% G2: 6.3% *Mixed Race:* Overall: 10% G1: 14.3% G2: 6.3%
Davidson, 2007*	**Total: 232** G1: 116 G2: 116	United States	Male and Female, Mixed trauma	**Overall: 42.3** G1: G2:	**Overall: 66%** G1: G2:	NR	NR
Davis, 2008*	**Total: 85** G1: 44 G2: 41	United States	Male and Female, Combat Veterans	**Overall: 55**	**Overall: 2%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Tucker, 2007*	**Total: 38** G1: 19 G2: 19	United States	Male and Female, Mixed trauma	**Overall: 41** G1: 42 G2: 41	**Overall: 79%** G1: 79% G2: 79%	NR	**Overall: 11%** *Black:* Overall: 5.3% G1: 0% G2: 11% *Other:* Overall: 5.3% G1: 5% G2: 5%
Yeh, 2011*	**Total: 35** G1: 17 G2: 18	Brazil	Male and Female Mixed	**Overall: 40** G1: 43.7 G2: 36.5	**Overall: 67%** G1: 70.58% G2: 64.28%	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #2: Atypical Antipsychotics

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Bartzokis, 2005	**Total: 65** G1: 33 G2: 32	United States	Male Combat Veterans	**Overall: 52**	**Overall: 0%**	NR	**Overall: 32%**
Butterfield, 2001*	**Total: 15** G1: 10 G2: 5	United States	Male and Female, mixed trauma	**Overall: 43**	**Overall: 93%**	NR	NR
Carey, 2012*	**Total: 28** G1: 14 G2: 14	South Africa	Adults w/non-combat related chronic PTSD, Noncombat	**Overall: 41**	**Overall: 61%**	NR	NR
Hammer, 2003	**Total: 37** G1: 19 G2: 18	United States	Male Combat Veterans	**Overall: 52** G1: 50.8 G2: 53.7	**Overall: 0%**	NR	**Overall: 54%** *African American:* Overall: 54% G1: 47.4% G2: 61.1%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Krystal, 2011*	**Total: 267** G1: 133 G2: 134	United States	Male and female Combat	**Overall: 54.4** G1: 54.2 G2: 54.5	**Overall: 3.4%** G1: 3.8% G2: 3%	**Overall: 10.1%** G1: 12% G2: 8.2%	**Overall: 24%** *Black, not Hispanic:* Overall: 18.7% G1: 18.8% G2: 18.7% *Other:* Overall: 4.9% G1: 6% G2: 3.7%
Monnelly, 2003*	**Total: 15** G1: 7 G2: 8	United States	Male Combat Veterans	**Overall: 51** G1: 48.9 G2: 53.5	**Overall: 0%**	**Overall: 6.7%**	**Overall: 13.3%** *Black:* Overall: 13.3%
Reich, 2004*	**Total: 21** G1: 12 G2: 9	United States	Female Childhood abuse	**Overall: 27** G1: 30.6 G2: 24.2	**Overall: 100%**	NR	**Overall: 14.3%** *African American:* Overall: 9.5% G1: 16.7% G2: 0% *Asian American:* Overall: 4.8% G1: 8.3% G2: 0%
Stein, 2002*	**Total: 19** G1: 10 G2: 9	United States	Male Combat Veterans	**Overall: 53** G1: 55.2 G2: 51.1	**Overall: 0%**	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #2: Selective Serotonin Reuptake Inhibitors (SSRIs)

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Brady, 2000*	**Total: 187** G1: 94 G2: 93	United States	Male and Female; mixed trauma	**Overall: 40** G1: 40.2 G2: 39.5	**Overall: 73%** G1: 75.5% G2: 71%	NR	**Overall: 16%** *Black:* Overall: 12% G1: 14.9% G2: 8.6% *Other:* Overall: 4% G1: 4.3% G2: 3.2%
Brady, 2005*	**Total: 94** G1: 49 G2: 45	United States	Male and female; mixed trauma, alcohol dependence	**Overall: 37** G1: 36.7 G2: 36.6	**Overall: 46%** G1: 43% G2: 49%	NR	NR
Connor 1999; Meltzer-Brody, 2000	**Total: 54** G1: 27 G2: 27	United States	Individuals aged 18-55 were included if they met DSM-III-R criteria for PTSD	**Overall: 37** G1: 36 G2: 38	**Overall: 91%** G1: 89% G2: 93%	NR	**Overall: 7%**
Davidson, 2006a*	**Total: 531** G1: 179 G2: 173 G3: 179	United States	Mixed trauma	**Overall: 32**	**Overall: 65%**	NR	NR
Davidson, 2001*	**Total: 208** G1: 100 G2: 108	United States	Male and Female; mixed trauma	**Overall: 37** G1: 37.6 G2: 36.6	**Overall: 78%** G1: 84% G2: 72%	NR	**Overall: 17%** *Black:* Overall: 12% G1: 13% G2: 11% *Other:* Overall: 4.5% G1: 4% G2: 5%
Friedman, 2007*	**Total: 169** G1: 86 G2: 83	United States	Male and Female; mixed trauma (71% combat)	**Overall: 42** G1: 42 G2: 42.8	**Overall: 20%** G1: 20.9% G2: 19.3%	NR	**Overall: 29%**
Li, 2017*	**Total: 72** G1: 36 G2: 36	China	Male and Female; mixed trauma	**Overall: 46** G1: 47.1 G2: 44.9	**Overall: 13%** G1: 13.9% G2: 11.1%	NR	**Overall: 100%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Marshall, 2001*	**Total: 563** G1: 188 G2: 187 G3: 188	United States	Male and Female; mixed trauma	**Overall: 42**	**Overall: 20%** G1: 22.9% G2: 21.9% G3: 14%	NR	NR
Martenyi, 2002*; Martenyi, 2006	**Total: 301** G1: 226 G2: 75	Belgium, Bosnia, Croatia, Israel, South Africa, and Yugoslavia	Male and female; Combat and victim/witness of war	**Overall: 38** G1: 38.2 G2: 37.1	**Overall: 19%**	NR	**Overall: 9%**
Martenyi, 2007*	**Total: 411** G1: 163 G2: 160 G3: 88	United States	Male and female, mixed trauma	**Overall: 40.82** G1: 41.03 G2: 39.96 G3: 41.47	**Overall: 72%** G1: 71.2% G2: 71.9% G3: 71.6%	**Overall: 7.1%** G1: 6.7% G2: 9.4% G3: 3.4%	**Overall: 16.1%** *African descent:* Overall: 13% G1: 13.5% G2: 12.5% G3: 12.5% *Other:* Overall: 3.2% G1: 3.7% G2: 4.4% G3: 0%
Panahi, 2011*	**Total: 70** G1: 35 G2: 35	Iran	Male Combat Veterans	**Overall: 46** G1: 46.5 G2: 44.6	**Overall: 0%**	NR	**Overall: 100%**
Simon, 2008	**Total: 23** G1: 9 G2: 14	United States	Male and female; mixed trauma (60% exposure to war; combat % NR), refractory to exposure	**Overall: 46** G1: 47.8 G2: 44.2	**Overall: 54%** G1: 44% G2: 64%	NR	**Overall: 26%**
Tucker, 2001*	**Total: 323** G1: 163 G2: 160	United States	Male and female; mixed trauma	**Overall: 41** G1: 41.9 G2: 39.8	**Overall: 66%** G1: 66.2% G2: 65.4%	NR	**Overall: 28%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Tucker, 2003*; Tucker 2004	**Total: 58** G1: 25 G2: 23 G3: 10	United States	Male and Female; mixed trauma	**Overall: 38** G1: 39.2 G2: 39.1 G3: 36.8	**Overall: 75%** G1: 68% G2: 78.3% G3: 80%	**Overall: 5.2%** G1: 8% G2: 4.3% G3: 0%	**Overall: 8.6%** *African American:* Overall: 5.2% G1: 12% G2: 0% G3: 0% *Native American:* Overall: 3.4% G1: 4% G2: 4.3% G3: 0%
van der Kolk, 1994*	**Total: 64** G1: 33 G2: 31	United States	Male and female; mixed trauma (48% combat)	**Overall: 44**	**Overall: 34%**	NR	NR
van der Kolk, 2007*	**Total: 88** G1: 29 G2: 30 G3: 29	United States	Male and female; Child-onset and adult-onset trauma	**Overall: 36.1** G1: 38.7 G2: 34.1 G3: 35.7	**Overall: 83%** G1: 75.9% G2: 86.7% G3: 86.2%	NR	**Overall: 33%**
Zohar, 2002*	**Total: 42** G1: 23 G2: 19	Israel	Male and Female, Israeli Military Veterans	**Overall: 40**	**Overall: 12%**	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #2: Serotonin Norepinephrine Reuptake Inhibitors (SNRIs)

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Davidson, 2006a*	**Total: 531** G1: 179 G2: 173 G3: 179	United States	Mixed trauma	**Overall: 32**	**Overall: 65%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Davidson, 2006b	**Total: 329** G1: 161 G2: 168	56 international sites: Argentina, Chile, Colombia, Denmark, Finland, Mexico, Norway, Portugal, South Africa, Spain, Sweden, and United Kingdom	Mixed trauma	**Overall: 41** G1: 42.2 G2: 40.5	**Overall: 54%** G1: 55.3% G2: 53%	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #2: Other Second-Generation Antidepressants

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Becker, 2007*	**Total: 28** G1: 18 G2: 10	United States	Male and Female Mixed trauma	**Overall: 50**	**Overall: 21%**	NR	NR
Davidson, 2003*	**Total: 29** G1: 17 G2: 9	United States	Male and Female Mixed trauma	**Overall: 46**	NR	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Key Question #3: Psychotherapy vs. Pharmacotherapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
van der Kolk, 2007*	**Total: 88** G1: 29 G2: 30 G3: 29	United States	Male and female, child-onset, and adult-onset trauma	**Overall: 36.1** G1: 38.7 G2: 34.1 G3: 35.7	**Overall: 83%** G1: 75.9% G2: 86.7% G3: 86.2%	NR	**Overall: 33%**

Note. G – Group; NR – Not reported; *Also cited in Hoskins et al. (2021) review.

Almeida et al., 2024 – Psychedelic Interventions (Ketamine)

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Abdallah, 2022*	**Total: 158** G1: 51 G2: 53 G3: 54	United States	Severe PTSD/ Veterans and active-duty service members	**Overall: 44** G1: 43.2 G2: 45.2 G3: 42	**Overall: 23%** G1: 25% G2: 18.9% G3: 25.9%	**Overall: 20%** G1: 23.5% G2: 20.8% G3: 14.8%	**Overall: 21%** *Black:* Overall: 13% G1: 13.7% G2: 13.2% G3: 11.1% *Other:* Overall: 8.2% G1: 5.9% G2: 13.2% G3: 5.6%
Feder, 2014**	**Total: 41** G1: 22 G2: 19	United States	Patients with chronic PTSD	**Overall: 36** G1: 36.4 G2: 35.7	**Overall: 45%** G1: 59.1% G2: 31.6%	**Overall: 11%** G1: 22.7% G2: 0%	**Overall: 83%** *Black:* Overall: 56.1% G1: 50% G2: 63.2% *Other:* Overall: 26.8% G1: 27.3% G2: 26.3%
Feder 2021*	**Total: 30** G1: 15 G2: 15	United States	Individuals between 18 and 70 with chronic PTSD	**Overall: 39** G1: 39.3 G2: 38.5	**Overall: 77%** G1: 86.7% G2: 66.7%	**Overall: 10%** G1: 13.3% G2: 6.7%	**Overall: 47%** G1: 16.65% G2: 16.65% G3: 13.3%
Harpaz-Rotem, 2022	NR	United States	Individuals age 21-75 years	NR	NR	NR	NR
Pradhan, 2018*	**Total: 20** G1: 10 G2: 10	United States	Adults with PTSD in outpatient setting	NR	NR	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Borgogna et al. (2024) review on Ketamine. **Also cited in Borgogna et al. (2024), Hoskins et al. (2021), and Williams et al. (2022)/Cochrane reviews.

Choi et al., 2020 – Psychological Interventions for PTSD and Complex PTSD

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Adenauer, 2011	**Total: 34** G1: 16 G2: 18	Germany	Organized violence	**Overall: 33** G1: 30.3 G2: 36.4	**Overall: 44%** G1: 44% G2: 44%	NR	NR
Bichescu, 2007	**Total: 18** G1: 9 G2: 9	Romania	Organized violence	**Overall: 69** G1: 68.9 G2: 69.8	**Overall: 6%** G1: 0% G2: 11.1%	NR	**Overall: 0%**
Bolton, 2014a	**Total: 281** G1: 114 G2: 101 G3: 66	Northern Iraq	Organized violence	**Overall: 40** G1: 36.9 G2: 41.5 G3: 42.3	**Overall: 58%** G1: 57% G2: 58% G3: 59%	NR	**Overall: 100%**
Bolton, 2014b	**Total: 347** G1: 182 G2: 165	Thailand	Organized violence	**Overall: 35**	**Overall: 63%**	NR	**Overall: 92%**
Duffy, 2007*	**Total: 58** G1: 29 G2: 29	Northern Ireland	Civil conflict	**Overall: 44** G1: 44.1 G2: 43.7	**Overall: 40%** G1: 34% G2: 45%	NR	NR
Edmond, 1999	**Total: 59**	United States	Child abuse (average age of onset = 6.5 years)	**Overall: 35**	**Overall: 100%**	NR	**Overall: 15%**
Ghafoori, 2016	**Total: 67** G1: 37 G2: 30	United States	Multiple inter-personal trauma	NR	**Overall: 45%** G1: 54% G2: 33.3%	**Overall: 16%** G1: 18.9% G2: 13.3%	**Overall: 57%** *Black (non-Hispanic):* Overall: 49% G1: 46% G2: 53.3% *Other:* Overall: 7% G1: 5.4% G2: 10%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Ghafoori, 2017*&**	**Total: 71** G1: 24 G2: 47	United States	Mixed trauma, exposure to violence, complex trauma	**Overall: 35.2** G1: 35.1 G2: 35.3	**Overall: 83.1%** G1: 83% G2: 83.3%	**Overall: 43.7%** G1: 42.6% G2: 45.8%	**Overall: 28%** *African American:* Overall: 19.7% G1: 17% G2: 25% *Asian-Pacific Islander:* Overall: 2.8% G1: 2.1% G2: 4.2% *Other race/ mixed:* Overall: 5.6% G1: 2.1% G2: 12.5%
Harkness, 2012	**Total: 203** G1: 64 G2: 70 G3: 69	Canada	Child abuse (under age 17)	**Overall: 42** G1: 40.2 G2: 41.4 G3: 42.8	**Overall: 64%**	NR	NR
Harned, 2014**	**Total: 26** G1: 17 G2: 9	United States	Multiple interpersonal trauma	**Overall: 33**	**Overall: 100%**	NR	**Overall: 19.2%** *Biracial:* Overall: 15.4% *Asian American:* Overall: 3.8%
Hensel-Dittmann, 2011*	**Total: 28** G1: 15 G2: 13	Germany	Refugees	NR	NR	NR	NR
Hijazi, 2014	**Total: 63** G1: 41 G2: 22	Germany	Organized violence	**Overall: 48**	**Overall: 55.6%** G1: 63.4% G2: 40.9%	NR	**Overall: 100%**
Jung, 2013**	**Total: 34** G1: 17 G2: 17	Germany	Child abuse (average age of onset = 7.7 years)	**Overall: 37**	**Overall: 100%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Katz, 2014	**Total: 51** G1: 17 G2: 17 G3: 17	United States	Military trauma (Female Veterans)	**Overall: 42** G1: 45 G2: 42 G3: 36	**Overall: 100%**	**Overall: 12%** G1: 12% G2: 6% G3: 17%	**Overall: 45%** *African American:* Overall: 20% G1: 12% G2: 24% G3: 24% *Other/missing data:* Overall: 25% G1: 35% G2: 29% G3: 12%
Korte, 2017	**Total: 81** G1: 54 G2: 27	United States	Military trauma	**Overall: 40** G1: 39.7 G2: 41.9	**Overall: 11.9%** G1: 7.4% G2: 14.8%	NR	**Overall: 37%** G1: 29.6% G2: 51.9%
Nixon, 2016	**Total: 47** G1: 25 G2 22	Australia	Multiple interpersonal trauma	**Overall: 31** G1: 32.4 G2: 29.9	**Overall: 96%** G1: 92% G2: 100%	NR	**Overall: 13%**
Pabst, 2014	**Total: 22** G1: 11 G2: 11	Germany	Multiple interpersonal trauma	**Overall: 16** G1: 17.2 G2: 14.4	**Overall: 100%**	NR	NR
Paivio, 2010	**Total: 45** G1: 20 G2: 25	Canada	Child abuse (onset under age 18)	**Overall: 46** G1: 45.7 G2: 45.08	**Overall: 53%** G1: 50% G2: 56%	NR	**Overall: 11%**
Pigeon, 2009	**Total: 70** G1: 37 G2: 33	United States	Child abuse (onset age not clear)	**Overall: 36** G1: 38.6 G2: 33.9	**Overall: 100%**	NR	**Overall: 42%**
Resick, 2008	**Total: 162** G1: 56 G2: 55 G3: 51	United States	Multiple interpersonal trauma	**Overall: 35**	**Overall: 100%**	**Overall: 3%**	**Overall: 37%** *African American:* Overall: 34% *Other:* Overall: 4%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Scheck, 1998**	**Total: 67**	United States	Child abuse (onset age not clear)	**Overall: 21**	**Overall: 100%**	**Overall: 15%**	**Overall: 23%** *African American:* Overall: 15% *Native American:* Overall: 8%
Stenmark, 2013	**Total: 81** G1: 51 G2: 30	Norway	Refugees and asylum seekers	**Overall: 36** G1: 34.5 G2: 36.6	**Overall: 60%** G1: 33% G2: 27%	NR	NR
Sullivan, 1999	**Total: 278**	United States	Multiple interpersonal trauma	**Overall: 29**	**Overall: 100%**	**Overall: 7%**	**Overall: 51%** *Black:* Overall: 45% *Asian American:* Overall: 2% *Native American, Arab American, or Mixed:* Overall: 4%
Suris, 2013[X]	**Total: 129** G1: 72 G2: 57	United States	Sexual abuse	**Overall: 46** G1: 44.6 G2: 48.4	**Overall: 85%** G1: 83% G2: 88%	NR	**Overall: 56%** *Black/African American:* Overall: 41% G1: 39% G2: 44% *Other:* Overall: 15% G1: 17% G2: 12%
Taft, 2011	**Total: 174**	Australia	Multiple interpersonal trauma	**Overall: 32**	**Overall: 100%**	NR	NR
Talbot, 2011**	**Total: 70** G1: 37 G2: 33	United States	Child abuse (under age 18)	**Overall: 36**	**Overall: 100%**	NR	**Overall: 42%** *Black:* Overall: 42%
ter Heide, 2011***	**Overall: 20** G1: 10 G2: 10	Germany	Organized violence	**Overall: 42** G1: 40 G2: 43	**Overall: 60%** G1: 50% G2: 70%	NR	**Overall: 0%**

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Tiwari, 2010	**Overall: 200** G1: 100 G2: 100	China	Multiple interpersonal trauma	**Overall: 38** G1: 38.18 G2: 37.99	**Overall: 100%**	NR	**Overall: 100%**
Vitriol, 2009	**Overall: 87** G1: 44 G2: 43	Chile	Child abuse (under the age of 15)	**Overall: 39** G1: 36.6 G2: 41.09	**Overall: 100%**	NR	**Overall: 100%**
Weiss, 2015 (CETA)	**Overall: 149** G1: 99 G2: 50	Iraq	Organized violence	**Overall: 43.38** G1: 41.6 G2: 45.16	**Overall: 30%** G1: 32.3% G2: 28%	NR	**Overall: 100%**
Weiss, 2015 (CPT)	**Overall: 193** G1: 129 G2: 64	Iraq	Organized violence	**Overall: 41** G1: 40 G2: 41	**Overall: 35%** G1: 32.6% G2: 37.5%	NR	**Overall: 100%**

Note. G – Group; NR – Not reported; *Also cited in Jericho et al. (2022) and Öst et al. (2023) reviews. **Also cited in Karatzias et al. (2019) review. ***Also cited in Choi et al. (2020) and Karatzias et al. (2019) reviews. XAlso cited in Jericho et al. (2022), Karatzias et al. (2019), and Öst et al. (2023) reviews.

DeJesus et al., 2024 – Written Exposure Therapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Sloan, 2018*	**Overall: 126** G1: 63 G2: 63	United States	Adults- Mixed	**Overall: 44** G1: 44.9 G2: 42.8	**Overall: 48%** G1: 47.6% G2: 47.6%	**Overall: 9.5%** G1: 3.2% G2: 15.9%	**Overall: 45.2%** *American Indian or Alaska Native:* Overall: 3.2% G1: 3.2% G2: 3.2% *Asian:* Overall: 1.6% G1: 1.6% G2: 1.6% *African American or Black:* Overall: 34.1% G1: 33.3% G2: 34.9% *Pacific Islander or Native Hawaiian:* Overall: 0.8% G1: 1.6% G2: 0% *Other:* Overall: 5.6% G1: 3.2% G2: 7.9%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Sloan, 2022	**Total: 169** G1: 84 G2: 85	United States	Military- Mixed trauma	**Overall: 34** G1: 33.32 G2: 33.98	**Overall: 20%** G1: 20.2% G2: 18.8%	**Overall: 25%** G1: 20.2% G2: 29.4%	**Overall: 40%** *African American:* Overall: 33.7% G1: 34.5% G2: 32.9% *Other (included individuals who identified as American Indian or Alaska Native, Asian, Pacific Islander, or biracial):* Overall: 6.5% G1: 6% G2: 7.1%
Sloan, 2023	**Total: 178** G1: 88 G2: 90	United States	Veterans- Mixed trauma	**Overall: 45** G1: 46.2 G2: 43.8	**Overall: 25%** G1: 24% G2: 26%	**Overall: 10.7%** G1: <10% G2: 13.3%	**Overall: 37%** *Black:* Overall: 20.8% G1: 22.7% G2: 18.9% *>1 Race:* Overall: 6.2% G1: <10% G2: <10% *Other (includes American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander [some did not specify race]):* Overall: 10.1% G1: <10% G2: 12.2%

Note. G – Group; NR – Not reported; *Also cited in Jericho et al. (2022) review.

Hoskins et al., 2021 – Pharmacological Augmentation

Pharmacological Monotherapy Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Baker, 1995a*	**Total: 114** G1: 56 G2: 58	United States	PTSD (based on DSM-III-R criteria); combat trauma	**Overall: 44** G1: 45 G2: 43	**Overall: 19.30%** G1: 21.4% G2: 17.2%	NR	NR
Braun, 1990	**Total: 16**	Israel	PTSD (based on DSM-III-R criteria); combat trauma	**Overall: 37.70**	NR	NR	NR
Connor, 1999*	**Total: 54** G1: 27 G2: 27	United States	Individuals aged 18-55 were included if they met DSM-III-R criteria for PTSD	**Overall: 37** G1: 36 G2: 38	**Overall: 91%** G1: 89% G2: 93%	NR	**Overall: 7%**
Davidson, 1990*	**Total: 46** G1: 25 G2: 21	United States	PTSD (based on DSM-III-R criteria)	NR	NR	NR	NR
Davidson, 2004	**Total: 384**	United States	PTSD (based on DSM-III-R criteria)	**Overall: 38.40**	**Overall: 75.50%**	NR	**Overall: 15.90%**
Davidson, 2005*	**Total: 57** G1: 27 G2: 30	United States	PTSD	**Overall: 44** G1: 44 G2: 44.1	**Overall: 53.5%**	NR	**Overall: 39.3%** *Black:* Overall: 33.3% G1: 30% G2: 40% *Asian:* Overall: 3.3% G1: 3.3% G2: 0% *Other:* Overall: 2.7%
Davis, 2004*	**Total: 41** G1: 26 G2: 15	United States	PTSD (based on DSM-IV criteria); combat and sexual trauma	**Overall: 53.8** G1: 53.8 G2: 53.8	**Overall: 2%**	NR	**Overall: 46.3%** G1: 46% G2: 47%
Dunlop, 2017*	**Total: 128** G1: 65 G2: 63	United States	Female; mixed trauma	**Overall: 41** G1: 40.4 G2: 40.6	**Overall: 100%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Hertzberg, 1999*	**Total: 15**	United States	Mixed trauma	**Overall: 43**	**Overall: 33%**	NR	NR
Hertzberg, 2000*	**Total: 12**	United States	Combat Veterans	**Overall: 46**	**Overall: 0%**	NR	NR
Katz, 1994*	**Total: 45** G1: 22 G2: 23	United States	PTSD (based on DSM-III-R criteria); physical assault	**Overall: 39** G1: 36 G2: 42	**Overall: 25%** G1: 23% G2: 26%	NR	NR
Kosten, 1991*	**Total: 60** G1: 19 G2: 23 G3: 18	United States	PTSD (based on DSM-III criteria); combat trauma	**Overall: 39** G1: 39 G2: 39 G3: 38	**Overall: 0%**	NR	**Overall: 13%**
Kwako, 2015	**Total: 53** G1: 26 G2: 27	United States	PTSD (based on DSM-IV criteria)	**Overall: 40.8** G1: 41.8 G2: 39.8	**Overall: 45.3%** G1: 42.3% G2: 48.1%	NR	**Overall: 57%** G1: 54% G2: 41%
Marshall, 2007	**Total: 52** G1: 27 G2: 25	United States	Male and female; Mixed trauma, chronic PTSD	**Overall: 40**	**Overall: 67%**	**Overall: 65.4%**	**Overall: 9.6%**
Mathew, 2011	**Total: 39** G1: 20 G2: 19	United States	Physical and sexual assault	**Overall: 41** G1: 38.7 G2: 43	**Overall: 59%** G1: 55% G2: 63.2%	**Overall: 26%** G1: 35% G2: 15.8%	**Overall: 38.5%** *Black:* Overall: 36% G1: 35% G2: 36.8% *Asian:* Overall: 3% G1: 0% G2: 5.3%
Padala, 2006*	**Total: 39** G1: 11 G2: 9	United States	PTSD due to sexual assault and domestic abuse	**Overall: 41.3** G1: 39.2 G2: 43.8	**Overall: 100%**	NR	**Overall: 56%** *African American:* Overall: 47% G1: 36% G2: 11% *Mixed:* Overall: 9% G1: 9% G2: Unknown
Pfizer, 588	**Total: 193**	Unknown	PTSD; Physical/ sexual assault	**Overall: 37**	**Overall: 74.65%**	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Rasmusson, 2017*	**Total: 112** G1: 59 G2: 53	United States	Male and female mixed-MDD and military	**Overall: 38** G1: 38.8 G2: 37.7	**Overall: 21%** G1: 25% G2: 17%	**Overall: 9%** G1: 10% G2: 8%	**Overall: 42%** *Black or African American:* Overall: 31% G1: 32% G2: 30% *Other (Native or Alaska American, Hawaiian or other Pacific Islander, Asian, Mixed, or Unknown):* Overall: 11% G1: 17% G2: 4%
Reist, 1989*	**Total: 27**	United States	PTSD (based on DSM-III-R criteria); combat trauma	**Overall: 38.4**	**Overall: 0%**	NR	NR
Shalev, 2011	**Total: 242** G1: 63 G2: 40 G3: 23 G4: 23 G5: 93	Israel	Male and Female; mixed trauma	**Overall: 39** G1: 40.1 G2: 39.54 G3: 39.83 G4: 36.26 G5: 37.28	**Overall: 56%** G1: 44.4% G2: 75% G3: 56.5% G4: 43.5% G5: 58.1%	NR	NR
Shestatzky, 1986	**Total: 13**	Israel	PTSD (based on DSM-III-R criteria); combat trauma	**Overall: Age range 26-50 years**	NR	NR	NR
SKB627	**Total: 322**	Unknown	PTSD (based on DSM-IV criteria)	NR	**Overall: 53.7%**	NR	NR
SKB650	**Total: 176**	Unknown	PTSD (based on DSM-IV criteria)	NR	**Overall: 66%**	NR	NR
Sonne, 2006	**Total: 25**	Unknown	PTSD (based on DSM-IV criteria)	**Overall: 35.5**	NR	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Villarreal, 2016*	**Total: 80** G1: 42 G2: 38	United States	Mixed trauma	**Overall: 53** G1: 52 G2: 54	**Overall: 7%** G1: 10% G2: 3%	NR	**Overall: 48%** *African American:* Overall: 26.3% G1: 29% G2: 24% *American Indian:* Overall: 21.3% G1: 21% G2: 21%

Note. G – Group; NR – Not reported; *Also cited in Williams et al. (2022)/Cochrane review.

Pharmacological Augmentation Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Ahmadpanah, 2014	**Total: 100** G1: 33 G2: 34 G3: 33	Switzerland	Male and Female; mixed trauma	**Overall: 36** G1: 36.18 G2: 36.12 G3: 34.21	**Overall: 29%** G1: 27.3% G2: 26.5% G3: 33.3%	NR	NR
Attari, 2014	**Total: 67** G1: 31 G2: 32	Iran	Male; combat trauma	**Overall: 50** G1: 50.1 G2: 50.2	**Overall: 0%**	NR	**Overall: 100%**
Baniasadi, 2014	**Total: 37** G1: 18 G2: 19	Iran	Combat trauma	**Overall: 48.2** G1: 47.7 G2: 48.6	**Overall: 0%**	NR	NR
Germain, 2012	**Total: 50** G1: 17 G2: 18 G3: 15	United States	Combat Veterans	**Overall: 41** G1: 40 G2: 39.4 G3: 43.6	**Overall: 10%** G1: 17.6% G2: 11.1% G3: 0%	NR	NR
Golier, 2012	**Total: 13**	United States	Veterans	**Overall: 49**	**Overall: 0%**	**Overall: 25%**	**Overall: 88%** *African American:* Overall: 75% *Other:* Overall: 12.5%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Hamner, 2000	**Total: 40**	United States	PTSD and current psychosis (based on DSM-IV criteria)	**Overall: 52**	**Overall: 0%**	NR	NR
Hamner, 2009	**Total: 29**	United States	PTSD (based on DSM-IV criteria); combat trauma	**Overall: 52.3**	**Overall: 3%**	NR	NR
Heresco-Levy, 2002	**Total: 11**	Israel	Mixed trauma	**Overall: 39**	**Overall: 18%**	NR	NR
Jetly, 2015	**Total: 10**	Canada	PTSD (based on DSM-IV criteria); combat trauma	**Overall: 43.6**	**Overall: 0%**	NR	**Overall: 0%**
Lindley, 2007	**Total: 40** G1: 20 G2: 20	United States	PTSD (based on DSM-IV criteria); combat trauma	**Overall: 53.4** G1: 52.9 G2: 53.9	**Overall: 0%**	Overall: 16%	**Overall: 22.5%** *African American:* Overall: 17.5% *Other:* Overall: 5%
Ludäscher, 2015	**Total: 30** G1: 15 G2: 15	Germany	Childhood sexual abuse	**Overall: 30.7**	**Overall: 100%**	NR	NR
Manteghi, 2014	**Total: 40**	Iran	PTSD (based on DSM-IV criteria); combat trauma	**Overall: 44.6**	**Overall: 0%**	NR	NR
Naylor, 2015**	**Total: 14** G1: 7 G2: 7	United States	US Veterans	**Overall: 34** G1: 36.14 G2: 31.5	**Overall: 36%** G1: 57% G2: 14.2%	**Overall: 7%** G1: 0% G2: 14%	**Overall: 43%** *African American:* Overall: 43% G1: 57% G2: 29%
Neylan, 2006	**Total: 65**	United States	Combat Veterans	NR	NR	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Petrakis, 2016	**Total: 96** G1: 50 G2: 56	United States	Combat	**Overall: 44** G1: 44.5 G2: 43.4	**Overall: 6%** G1: 8% G2: 4.44%	NR	**Overall: 18%** *African American:* Overall: 15% G1: 14% G2: 15.21% *Other:* Overall: 3% G1: 3% G2: 0%
Pollack 2011	**Total: 24**	United States	PTSD (based on DSM-IV criteria) and comorbid sleep disturbance	**Overall: 42**	**Overall: 70.8%**	NR	**Overall: 30%**
Ramaswamy, 2015	**Total: 30** G1: 15 G2: 15	United States	Male and Female mixed	**Overall: 39** G1: 39.5 G2: 38.3	**Overall: 87%** G1: 80% G2: 93%	NR	NR
Raskind, 2018	**Total: 304** G1: 152 G2: 152	United States	Combat Veterans	**Overall: 52** G1: 52.3 G2: 51.4	**Overall: 2%** G1: 3.9% G2: 0.7%	**Overall: 17%** G1: 16.4% G2: 17.8%	**Overall: 26%** *Black:* Overall: 26% G1: 27% G2: 25%
Rothbaum, 2008	**Total: 20** G1: 9 G2: 11	United States	PTSD (based on DSM-IV criteria); sexual violence	**Overall: 34.1** G1: 33.4 G2: 34.8	**Overall: 80%** G1: 78% G2: 82%	NR	**Overall: 30%** *Black:* Overall: G1: 33% G2: 18% *Other:* Overall: 9% G1: 0% G2: 9%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Schneier, 2015	**Total: 36** G1: 18 G2: 18	United States	Physical assault	**Overall: 40** G1: 37.6 G2: 42.4	**Overall: 64%** G1: 66.7% G2: 61.1%	**Overall: 61%** G1: 55.6% G2: 66.7%	**Overall: 75%** *Black:* Overall: 19.4% G1: 22.2% G2: 27.8% *Other (mostly Hispanic):* Overall: 56% G1: 55.6% G2: 44.4%
Simpson, 2015	**Total: 30** G1: 15 G2: 15	United States	Physical assault	**Overall: 43** G1: 43.1 G2: 43.5	**Overall: 37%** G1: 40% G2: 33%	NR	**Overall: 60%** *Black:* Overall: 40% G1: 26.7% G2: 53.3% *Other:* Overall: 20% G1: 20% G2: 20%
Taylor, 2008	**Total: 13**	United States	Childhood sexual abuse	**Overall: 49**	**Overall: 85%**	NR	NR
van Liempt, 2012	**Total: 14**	The Netherlands	PTSD (based on DSM-IV criteria); combat trauma	**Overall: 44.2**	**Overall: 0%**	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Williams et al. (2022)/Cochrane review. **Also cited in Zhang et al. (2023) review.

Pharmacotherapy vs. Pharmacotherapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Kosten, 1991*	**Total: 42** G1: 19 G2: 23	United States	PTSD (based on DSM-III criteria); combat trauma	**Overall: 39** G1: 39 G2: 39	**Overall: 0%**	NR	**Overall: 14%** G1: 5% G2: 9%
McRae, 2004*	**Total: 37** G1: 18 G2: 19	United States	Male and Female; mixed trauma	**Overall: 40** G1: 41.85 G2: 38.69	**Overall: 77%** G1: 77% G2: 77%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Petrakis, 2012	**Total: 88** G1: 22 G2: 20 G3: 22 G4: 24	United States	Combat	**Overall: 47** G1: 45 G2: 59 G3: 47 G4: 47	**Overall: 9%** G1: 0% G2: 5% G3: 18.2% G4: 12.5%	NR	**Overall: 25%** *African American:* Overall: 21.6% G1: 22.7% G2: 25% G3: 13.6% G4: 25% *Other:* Overall: 3.4% G1: 4.5% G2: 5% G3: 0% G4: 4.2%
Saygin, 2002*	**Total: 54** G1: 30 G2: 24	Turkey	Earthquake survivors	**Overall: 42** G1: 37.7 G2: 46.13	**Overall: 77.1%** G1: 66.6% G2: 87.5%	NR	NR
Spivak, 2006*	**Total: 40** G1: 20 G2: 20	Israel	PTSD (based on DSM-IV criteria); road traffic accidents	**Overall: 40.08** G1: 37.45 G2: 42.7	**Overall: 48%** G1: 45% G2: 50%	NR	NR

Note. G – Group; NR – Not reported; *Also cited in Williams et al. (2022)/Cochrane review.

Pharmacotherapy vs. Psychotherapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Buhman, 2018	**Total: 280**	Denmark	Asylum	**Overall: 49**	**Overall: 41%**	NR	NR
Frommberger, 2004	**Total: 21** G1: 11 G2: 10	Germany	PTSD (based on DSM-III-R criteria); serious accidents	**Overall: 42.6** G1: 44 G2: 41.2	**Overall: 58.18%** G1: 36.36% G2: 80%	NR	NR
Jerud, 2016	**Overall: 200**	United States	Sexual assault	NR	**Overall: 75%**	NR	NR
Popiel, 2015	**Overall: 228**	Poland	Motor vehicle accident	**Overall: 37**	NR	NR	NR

Note. G – Group; NR – Not reported.

Illingworth et al. 2021 – Psychedelic Interventions (MDMA-assisted Psychotherapy)

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Mithoefer, 2010	**Total: 20** G1: 12 G2: 8	United States	Mixed trauma	**Overall: 40** G1: 40.2 G2: 40.8	**Overall: 85%** G1: 83% G2: 87%	NR	**Overall: 0%**
Mithoefer, 2018	**Total: 26** G1: 7 G2: 7 G3: 12	United States	Mixed trauma	**Overall: 37** G1: 39 G2: 29 G3: 41	**Overall: 27%** G1: 29% G2: 14% G3: 33%	**Overall: 8%** G1: 14% G2: 14% G3: 0%	**Overall: 4%** *Native American:* Overall: 4% G1: 0% G2: 14% G3: 0%
Oehen, 2013	**Total: 12** G1: 8 G2: 4	Switzerland	Male and Female; mixed trauma	**Overall: 41** G1: 42.1 G2: 40	**Overall: 83%** G1: 87% G2: 75%	NR	NR
Ot'alora, 2018	**Total: 28** G1: 6 G2: 9 G3: 13	United States	Mixed trauma	**Overall: 42** G1: 40 G2: 39.6 G3: 44.6	**Overall: 68%** G1: 83% G2: 67% G3: 62%	**Overall: 3.6%** G1: 0% G2: 11.1% G3: 0%	**Overall: 3.6%** *Native American:* Overall: 3.6% G1: 16.7% G2: 0% G3: 0%

Note. G – Group; NR – Not reported.

Jericho et al. 2022 – Psychological Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Bryant, 2019	**Overall: 100** G1: 33 G2: 33 G3: 34	Australia	Emergency services	**Overall: 44** G1: 44.7 G2: 42.8 G3: 43.4	**Overall: 23%** G1: 12.1% G2: 27.3% G3: 29.4%	NR	**Overall: 12%** G1: 9.1% G2: 12.1% G3: 14.7%

Note. G – Group; NR – Not reported.

Karatzias et al., 2019 – Psychological Interventions for Complex PTSD

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Ahmadi, 2015	**Total: 53** G1: 16 G2: 16 G3: 16	Iran	Military	**Overall: 30** G1: 29.4 G2: 30.8 G3: 29.8	**Overall: 0%**	**Overall: 0%**	**Overall: 100%**
Azad Marzabadi, 2014	**Total: 28** G1: 14 G2: 14	Iran	Military	NR	**Overall: 0%**	**Overall: 0%**	**Overall: 100%**
Beidel, 2011**	**Total: 92** G1: 49 G2: 43	United States	Combat Veterans	**Overall: 35** G1: 37.67 G2: 33.26	**Overall: 6%** G1: 8.2% G2: 4.7%	**Overall: 29%** G1: 28.6% G2: 30.2%	**Overall: 9.8%** *Black/African American:* Overall: 6.5% G1: 4.1% G2: 9.3% *Asian/Pacific Islander:* Overall: 1.1% G1: 0% G2: 2.3% *Other:* Overall: 2.2% G1: 2% G2: 2.3%
Beidel, 2019	**Total: 35** G1: 18 G2: 17	United States	Military Veterans	**Overall: 59** G1: 58.93 G2: 59.76	**Overall: 0%**	**Overall: 0%**	**Overall: 0%**
Bryant, 2013	**Total: 70** G1: 34 G2: 36	Australia	Adult civilian patients	**Overall: 40** G1: 41.15 G2: 37.86	**Overall: 54%** G1: 50% G2: 58%	NR	**Overall: 17%**
Buttolo, 2016	**Total: 141** G1: 74 G2: 67	Germany	Mixed (interpersonal, accident, other)	**Overall: 36** G1: 37.99 G2: 33.67	**Overall: 66%** G1: 64.9% G2: 67.2%	NR	NR
Difede, 2007	**Total: 31** G1: 15 G2: 16	United States	Disaster workers	**Overall: 45.77**	NR	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Dorrepaal, 2012	**Total: 71** G1: 38 G2: 33	The Netherlands	Child Sexual Abuse survivor	**Overall: 39** G1: 40.3 G2: 37.1	NR	NR	NR
Dunn, 2007	**Total: 101** G1: 51 G2: 50	United States	Male Veterans	**Overall: 55** G1: 54.7 G2: 55	**Overall: 0%**	**Overall: 12%** G1: 13.7% G2: 10%	**Overall: 33%** *African American:* Overall: 28% G1: 33.3% G2: 22% *Other:* Overall: 5% G1: 5.9% G2: 4%
Dunne, 2012	**Total: 26** G1: 13 G2: 13	Australia	Motor vehicle accident survivors	**Overall: 32.54**	**Overall: 50%**	NR	NR
Keane, 1989	**Total: 24** G1: 11 G2: 13	United States	Veterans	**Overall: 34.6** G1: 34.7 G2: 34.5	**Overall: 0%**	**Overall: 9%** G1: 9% G2: 0%	**Overall: 31%** G1: 0% G2: 31%
Kip, 2013	**Total: 57** G1: 29 G2: 28	United States	Veteran	**Overall: 41** G1: 28.9 G2: 44	**Overall: 19%** G1: 17.2% G2: 21.4%	**Overall: 10.5%** G1: 17.2% G2: 3.6%	**Overall: 16%** *Black or African American:* Overall: 10.5% G1: 10.3% G2: 10.7% *Other:* Overall: 5.3% G1: 3.5% G2: 7.1%
Krupnick, 2008	**Total: 48** G1: 32 G2: 16	United States	Trauma survivors	**Overall: 32**	**Overall: 100%**	**Overall: 13%**	**Overall: 81%** *African American:* Overall: 75% *Afro-Caribbean:* Overall: 2.1% *Asian American:* Overall: 4.2%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Mueser, 2015	**Total: 191** G1: 87 G2: 104	United States	Patients with severe mental illness	**Overall: 44** G1: 44.52 G2: 42.96	**Overall: 69%** G1: 67% G2: 70.2%	**Overall: 19%** G1: 20.6% G2: 15.4%	**Overall: 69%** *African American:* Overall: 59% G1: 61.9% G2: 51% *American Indian or Alaska Native:* Overall: 1% G1: 2.1% G2: 0% *Asian:* Overall: 1% G1: 1% G2: 1% *Native Hawaiian or Pacific Islander:* Overall: 0.5% G1: 1% G2: 0% *Mixed Ethnicity:* Overall: 7.3% G1: 5.2% G2: 8.7%
Pacella, 2012	**Total: 66** G1: 41 G2: 45	United States	Trauma related to HIV status	**Overall: 47** G1: 46 G2: 48	**Overall: 36%**	**Overall: 6.1%**	**Overall: 55.4%** *African American* Overall: 44.6% *More than one race:* Overall: 10.8%
Power, 2002	**Total: 72** G1: 27 G2: 21 G3: 24	United Kingdom	Mixed trauma	**Overall: 39** G1: 38.6 G2: 43.2 G3: 36.5	**Overall: 41%** G1: 44% G2: 38% G3: 42%	NR	NR
Steel, 2017	**Total: 61** G1: 30 G2: 31	United Kingdom	Mixed trauma	**Overall: 42** G1: 43.8 G2: 40.7	**Overall: 38%** G1: 40% G2: 36%	NR	**Overall: 28%** G1: 25.8% G2: 30%

Note. G – Group; NR – Not reported. *Also cited in Jericho et al. (2022) review. **Also cited in Jericho et al. (2022) and Öst et al. (2023) reviews.

Roberts et al., 2022 – Psychological Interventions for Comorbid PTSD and Substance Use Disorder

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Back, 2019	81	United States	Treatment-seeking veterans	40.00	10.00%	4.00%	40.00%
Boden, 2014	117	United States	Military Veterans	54.00	0.00%	7.00%	67.00%
Capone, 2018	44	United States	Military Veterans	34.00	5.00%	12.00%	23.00%
Foa, 2013	165	United States	Treatment-seeking participants (alcohol dependence)	43.00	35.00%	4.00%	69.00%
Frisman, 2008	213	United States	Patient recruited from outpatient SUD clinics	37.00	60.00%	11.00%	34.10%
Kehle-Forbes, 2019	183	United States	Veterans recruited through a variety of channels. Alcohol and Drug abuse (the sample was mostly alcohol dependent)	44.00	8.00%	5.00%	85.00%
McGovern, 2011	53	United States	Participants recruited from community intensive outpatient or methadone maintenance programs	37.00	58.00%	NR	91.00%
Myers, 2015	40	United States	Participants were victims of IPV recruited through flyers in community agencies serving IPV victims and in primary care and psychiatry clinics	42.00	100.00%	28.00%	12.00%

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Najavits, 2018	52	United States	Veterans recruited through clinicians, flyers, and word of mouth	48.00	27.00%	4.00%	36.00%
Norman, 2019	119	United States	Veterans recruited through veterans' mental health service clinics	42.00	10.00%	NR	11.00%
Possemato, 2019	30	United States	Military veterans with PTSD and problematic alcohol misuse recruited from primary care	39.00	7.00%	NR	20.00%
Schacht, 2017	58	United States	Participants recruited from an outpatient methadone maintenance clinic	38.00	80.00%	NR	29.00%
Schafer, 2019	343	Germany	Participants recruited via substance abuse and other psycho-social counsel-ling agencies, substance abuse and mental health clinics, psychothera-pists in private practice and in the community (alcohol and polydrug use)	40.90	100.00%	NR	NR
Stappenbeck, 2015	80	United States	Outpatients recruited through newspaper adverts and flyers (alcohol dependence)	44.00	38.00%	4.00%	50.00%

Note. NR – Not reported.

Öst et al., 2023 – CBT in Routine Clinical Settings

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Alvarez, 2011	197	United States	Combat	52.00	0.00%	0.00%	41.00%
Arntz, 2007a*	42	The Netherlands	Mixed trauma	35.00	69.00%	NR	NR
Arntz, 2007b*	29	The Netherlands	Mixed trauma	35.00	61.00%	NR	NR
Bryant, 2011*	18	United States	Combat	59.00	0.00%	0.00%	0.00%
Chard, 2010a	17	United States	Combat	60.00	0.00%	0.00%	0.00%
Chard, 2010b	28	Thailand	Terrorism	43.10	96.00%	NR	NR
Dickstein, 2013	51	United States	Combat	31.00	0.00%	NR	12.00%
Eftekhari, 2013	1931	United States	Combat	47.00	13.00%	NR	NR
Ehlers, 2013	330	England	Mixed	39.00	56.00%	NR	NR
Feske, 2001	10	United States	Various trauma	43.20	100.00%	NR	NR
Gillespie, 2002	91	Northern Ireland	Terrorism	36.00	70.00%	NR	NR
Goodson, 2013	115	United States	Combat	51.00	14.00%	NR	47.00%
Gros, 2011	62	United States	Veterans	45.10	6.50%	NR	45.20%
Held, 2022	10	United States	Combat	42.00	40.00%	NR	60.00%
Hendriks, 2018	73	The Netherlands	Assault	40.00	86.00%	NR	NR
Jeffreys, 2014	263	United States	Treatment of PTSD in a Veteran Healthcare Facility (medical chart review)	51.00	6.00%	55.40%	4.20%
Laska, 2013	192	United States	Combat	50.00	10.00%	NR	NR
Lehrner, 2021*	60	United States	Iraq or Afghanistan Veterans	35.35	10.00%	55.00%	15.00%
Mouilso, 2016	325	United States	Combat	51.00	10.00%	4.00%	30.00%
Nacasch, 2011*	30	United States	Combat	34.00	7.00%	NR	NR
Oprel, 2021a*	48	The Netherlands	Combat	35.00	77.00%	NR	NR
Oprel, 2021b*	50	The Netherlands	Combat	37.00	78.00%	NR	NR
Rauch, 2009	10	United States	Combat	39.00	20.00%	0.00%	0.00%
Rauch, 2021	77	United States	Combat	42.00	23.00%	16.00%	53.00%
Schnurr, 2022a*	455	United States	Mixed trauma	46.00	21.00%	15.00%	39.00%
Schnurr, 2022b*	461	United States	Mixed trauma	45.00	20.00%	15.00%	42.00%
Schumm, 2013	325	United States	Combat	51.00	10.00%	4.00%	30.00%
van Minnen, 2002a	59	The Netherlands	Mixed trauma	34.00	59.00%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
van Minnen, 2002b	63	The Netherlands	Mixed trauma	36.00	55.00%	NR	NR
Walter 2014a	86	United States	Combat	NR	0.00%	2.00%	21.00%
Walter 2014b	992	United States	Combat	46.00	24.00%	2.00%	26.00%
Wierwille, 2016	221	United States	Combat	47.00	12.00%	NR	NR
Yoder, 2013	66	United States	Older Veterans	64.92	0.00%	NR	64.00%

Note. *Randomized controlled trial (RCT); G – Group; NR – Not reported.

Sijercic et al., 2022 – Couples' and Individual Treatment for PTSD

Couples' Therapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Cahoon, 1984	38	United States	PTSD and marital distress	NR	NR	NR	NR
Fredman, 2020	48	United States	Military and Veteran couples	40.00	50.00%	31.00%	58.00%
Monson, 2011	14	United States	Mixed couple	41.00	33.00%	NR	NR
Pukay-Martin, 2015	14	Canada	Mixed PTSD	45.00	50.00%	NR	21.00%
Sautter, 2009	12	United States	Veteran couples	56.00	50.00%	NR	50.00%
Sautter, 2014	14	United States	Veteran couples	37.00	50.00%	NR	71.00%
Schumm, 2015	26	United States	U.S. Military Veterans and Their Partners	41.00	50.00%	NR	50.00%
Weissman, 2018	30	United States	Veteran couples	43.00	NR	NR	3.00%

Note. All the studies reported above are uncontrolled trials; NR – Not reported

Individual Therapy

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Campanini, 2010	33	Brazil	Mixed	NR	70.00%	NR	NR
Creamer, 2006	2,223	Australia	Vietnam Veterans	52.00	0.00%	NR	NR
Evans, 2009	311	Australia	Australian Veterans	52.00	0.00%	NR	NR
Flanagan, 2017	15	United States	Veterans	41.00	7.00%	NR	33.00%
Galovski, 2005*	70	United States	NR	33.19	100.00%	NR	NR

Note. *Randomized controlled trial (RCT); NR – Not reported.

van de Kamp et al., 2023 – Complementary and Integrative Health Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Brom, 2017	63	Israel	Civilians	41.00	51.00%	NR	NR
Carter, 2013	31	Canada	Military	58.00	0.00%	NR	NR
Davis, 2020	209	United States	Military and Civilians	51.00	34.00%	NR	38.00%
Descilo, 2009	183	India	Civilians	33.00	88.00%	NR	NR
Gibert, 2022	34	France	Civilians (diving)	35.00	65.00%	NR	NR
Hall, 2020	54	United States	Military	67.00	12.00%	14.00%	82.00%
Hoekenga, 2010	31	Germany	NR	NR	NR	NR	NR
Kelly, 2021	104	United States	Military	48.00	100.00%	NR	99.00%
Kim, 2013	29	United States	Civilians	46.00	97.00%	40.00%	11.00%
Lang, 2019	37	United States	Military	49.00	25.00%	NR	24.00%
Mitchell, 2014	38	United States	Military and Civilians	44.00	100.00%	NR	48.00%
Nakamura, 2011	63	United States	Military	52.00	5.00%	NR	NR
Quiñones, 2015	100	Colombia	Military	NR	27.00%	NR	NR
Reinhardt, 2018	51	United States	Military	49.00	26.00%	8.00%	27.00%
Rosenbaum, 2015	81	Australia	Civilians	48.00	16.00%	NR	NR
Sepällä, 2014	21	United States	Military	29.00	0.00%	NR	NR
Thorp, 2019	87	United States	Military	65.00	0.00%	NR	24.00%
van der Kolk, 2014	64	United States	Civilians	43.00	100.00%	14.00%	22.00%
Vera, 2022	98	Puerto Rico	Civilians	44.00	82.00%	NR	NR
Whitworth, 2019b	22	United States	Civilians	33.00	82.00%	NR	77.00%
Zaccari, 2022	41	United States	Military	45.00	NR	NR	88.00%

Note. NR – Not reported.

Williams et al., 2022/Cochrane – Pharmacological Interventions

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
Chung, 2004	113	Korea	Korean war veterans	60.00	0.00%	NR	100.00%
Connor, 2006	29	United States	Individuals aged 18-65 were included if they met DSM-III-R criteria for PTSD	28.00	73.00%	NR	38.00%
Davidson, 2001b	96	United States	Male and Female; mixed trauma	43.00	70.00%	NR	NR
Davis, 2020	78	United States	Male and female US Military Veterans with current PTSD diagnosis	38.00	6.40%	NR	NR
Dowd, 2020	25	United States	Mixed trauma	43.00	44.00%	8.00%	68.00%
GSK 29060 627	322	Austria, Belgium, Canada, France, Germany, Ireland, The Netherlands, South Africa, United Kingdom, Italy, Israel, and Switzerland	PTSD diagnosis (DSM-IV criteria)	39.20	54.00%	NR	NR
Hamner, 2008	29	United States	PTSD diagnosis (DSM-IV criteria, SCID, and CAPS-1)	52.35	3.40%	NR	NR
Kaplan, 1996	13	Israel	Mixed trauma	40.00	38.00%	NR	100.00%
Martenyi, 2002b	301	Belgium, Bosnia, Croatia, Israel, South Africa, and Yugoslavia	Male and Female; mixed trauma	38.00	19.00%	NR	10.00%
McCall, 2018	20	United States	Male and Female mixed trauma for PTSD with nightmare	40.00	85.00%	NR	NR
McRae, 2004	37	United States	Male and Female mixed trauma	40.00	77.00%	NR	NR

Author, year	Sample Size	Country/ Region	Diagnosis/ Population	Mean Age	% Female	% Hispanic/ Latino/a/e/x	% Non-White
NCT00659230	100	United States	Veterans with PTSD (included comorbid MDD)	37.96	5.50%	NR	NR
NCT01000493	129	United States	Non-combat related trauma	36.70	77.00%	NR	NR
NCT01681849	28	United States	PTSD diagnosis (DSM-IV and CAPS)	NR	100.00%	NR	NR
Pfizer588	190	United States	Physical/ sexual assault	37.00	76.00%	NR	NR
Pfizer589	169	United States	PTSD, predominantly war-trauma (71% of sample)	45.00	20.00%	NR	NR
Raskind, 2018	304	United States	Combat Veterans	52.00	2.00%	17.00%	26.00%
Shestazky, 1988	13	Israel	PTSD (DSM-III criteria)	38.50	NR	NR	NR
SKB627	322	NR	PTSD (DSM-IV criteria)	Mean age 18-75 years	54.00%	NR	NR
SKB650	176	NR	PTSD (DSM-IV criteria)	43.00	65.00%	NR	NR
Smajkic, 2001	32	United States	Refugees	51.00	56.00%	NR	100.00%
Villarreal, 2016	80	United States	Mixed trauma	53.00	7.00%	NR	48.00%

Note. NR – Not reported.

APPENDIX I

APA's Search Methodology for Identifying Systematic Reviews and Meta-Analyses

Date	Search Method	Search Term(s)	# of Hits
7/26/2021	PubMed	((“psychologic”[All Fields] OR “psychological”[All Fields] OR “psychologically”[All Fields] OR “psychologization”[All Fields] OR “psychologized”[All Fields] OR “psychologizing”[All Fields] OR (“pharmacologically”[All Fields] OR “pharmacologicals”[All Fields] OR “pharmacologics”[All Fields] OR “pharmacology”[MeSH Terms] OR “pharmacology”[All Fields] OR “pharmacologic”[All Fields] OR “pharmacological”[All Fields])) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (humans[Filter]) AND (systematicreviews[Filter]) AND (alladult[Filter]) AND (2018:2021[pdat]))	54
7/26/2021	Cochrane	“post-traumatic stress disorders” with Cochrane Library pub date in the last 2 years in Cochrane reviews (word variations have been searched	10
7/26/2021	Google Scholar	treatments for post traumatic stress disorder AND systematic review published since 2020	16,800
7/29/2021	PTSDpubs (ProQuest)	PTSD AND (non pharmacological) OR pharmacological AND (a systematic review) -- last 3 years, limit to peer-reviewed	16
7/29/2021	PTSDpubs (ProQuest)	(SU.exact(“SYSTEMATIC REVIEW”) AND SU.exact(“META ANALYSIS”)) - 2018-01-01 to 2021-07-29, limit to peer-reviewed	32
8/2/2021	PsycNET	posttraumatic stress disorder AND Any Field: treatment AND Age Group: Adulthood (18 yrs & older) AND Document Type: Journal Article AND Methodology: Systematic Review AND Peer-Reviewed Journals only AND Year: 2018 To 2021	32
8/2/2021	PsycNET	posttraumatic stress disorder AND Any Field: treatment AND Age Group: Adulthood (18 yrs & older) AND Document Type: Journal Article AND Methodology: Meta Analysis AND Peer-Reviewed Journals only AND Year: 2018 To 2021	18
8/2/2021	Google Scholar	posttraumatic stress disorder AND treatment AND peer reviewed (since 2021)	17,500
8/4/2021	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (humans[Filter]) AND (systematicreviews[Filter]) AND (2018/1/1:2021/8/4[pdat]) AND (adult[Filter]))	94
8/4/2021	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“eye movement desensitization reprocessing”[MeSH Terms] OR (“eye”[All Fields] AND “movement”[All Fields] AND “desensitization”[All Fields] AND “reprocessing”[All Fields]) OR “eye movement desensitization reprocessing”[All Fields] OR “emdr”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (humans[Filter]) AND (systematicreviews[Filter]) AND (2018/1/1:2021/8/4[pdat]) AND (adult[Filter]))	4
8/4/2021	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND “CBT”[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (humans[Filter]) AND (systematicreviews[Filter]) AND (2018/1/1:2021/8/4[pdat]) AND (adult[Filter]))	8
8/12/2021	Google Scholar	PTSD treatment AND systematic review AND adults	17,600

Date	Search Method	Search Term(s)	# of Hits
8/24/2021	PubMed	((“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (humans[Filter]) AND (english[Filter]) AND (alladult[Filter]) AND (2018:2021[pdat]))	11
8/24/2021	PubMed	(“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])	2,561
8/24/2021	PubMed	((“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (2018:2021[pdat]))	48
8/24/2021	PTSDpubs (ProQuest)	complex PTSD AND 2018-2021	99
9/21/2021	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]))	134
11/23/2021	PubMed	Same as 7/26/2021 search EXCEPT only searched for 2021-2022	59
3/8/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]))	28
3/8/2022	Google Scholar	PTSD treatment AND systematic review (2022)	15,300
3/8/2022	PTSDpubs (ProQuest)	PTSD AND (non pharmacological treat) OR pharmacological	2
3/8/2022	PTSDpubs (ProQuest)	PTSD AND treatment (8-1-2021 to 3-8-2022)	60

Date	Search Method	Search Term(s)	# of Hits
5/26/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields]) AND (“2021/05/26 00:00”:”3000/01/01 05:00”[Date - Publication] AND (“meta analysis”[Publication Type] OR “systematic review”[Filter]) AND “adult”[MeSH Terms])) AND (2022:2022[pdat])	15
5/26/2022	PTSDpubs (ProQuest)	PTSD AND Treatment (published last 3 months)	7
5/26/2022	PsycNET	PTSD AND Any Field: treatment AND Any Field: “Peer Reviewed Journal” AND Methodology: Systematic Review AND Methodology: Meta Analysis AND Peer-Reviewed Journals only AND Year: 2022	3
6/21/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields]) AND (“2021/05/26 00:00”:”3000/01/01 05:00”[Date - Publication] AND (“meta analysis”[Publication Type] OR “systematic review”[Filter]) AND “adult”[MeSH Terms]) AND 2022/01/01:2022/12/31[Date - Publication]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	18
6/21/2022	Google Scholar	PTSD AND Systematic Review (2022)	17200
7/20/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]))	32
7/20/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields]) AND (“2021/07/20 00:00”:”3000/01/01 05:00”[Date - Publication] AND (“meta analysis”[Publication Type] OR “systematic review”[Filter]) AND “adult”[MeSH Terms])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	20
8/12/2022	Cochrane	PTSD	10
8/12/2022	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields]) AND (“2021/07/20 00:00”:”3000/01/01 05:00”[Date - Publication] AND (“meta analysis”[Publication Type] OR “systematic review”[Filter]) AND “adult”[MeSH Terms])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	22
8/12/2022	PsycNET	PTSD AND Any Field: treatments AND Age Group: Adulthood (18 yrs & older) AND Methodology: Systematic Review OR Meta Analysis AND Peer-Reviewed Journals only AND Year: 2021 To 2022	7
8/23/2022	Google Scholar	complex PTSD AND systematic review	17,000

Date	Search Method	Search Term(s)	# of Hits
8/24/2022	PubMed	("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	44
8/24/2022	PubMed	((("complex"[All Fields] OR "complex s"[All Fields] OR "complexant"[All Fields] OR "complexants"[All Fields] OR "complexated"[All Fields] OR "complexation"[All Fields] OR "complexations"[All Fields] OR "complexe"[All Fields] OR "complexed"[All Fields] OR "complexes"[All Fields] OR "complexing"[All Fields] OR "complexities"[All Fields] OR "complexity"[All Fields] OR "complexs"[All Fields]) AND ("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	2
9/16/2022	Google Scholar	complex PTSD AND systematic review OR meta-analysis -prevention	17,100
10/11/2022	PubMed	("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	50
10/11/2022	PubMed	((("complex"[All Fields] OR "complex s"[All Fields] OR "complexant"[All Fields] OR "complexants"[All Fields] OR "complexated"[All Fields] OR "complexation"[All Fields] OR "complexations"[All Fields] OR "complexe"[All Fields] OR "complexed"[All Fields] OR "complexes"[All Fields] OR "complexing"[All Fields] OR "complexities"[All Fields] OR "complexity"[All Fields] OR "complexs"[All Fields]) AND ("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	2
11/7/2022	PubMed	Search: PTSD Filters: Meta-Analysis, Systematic Review, Adult: 19+ years, from 2022 - 2022 Sort by: Most Recent ("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	55
11/7/2022	Google Scholar	PTSD AND systematic review OR meta analysis (2022)	16,600
11/8/2022	PubMed	((("complex"[All Fields] OR "complex s"[All Fields] OR "complexant"[All Fields] OR "complexants"[All Fields] OR "complexated"[All Fields] OR "complexation"[All Fields] OR "complexations"[All Fields] OR "complexe"[All Fields] OR "complexed"[All Fields] OR "complexes"[All Fields] OR "complexing"[All Fields] OR "complexities"[All Fields] OR "complexity"[All Fields] OR "complexs"[All Fields]) AND ("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2022:2022[pdat]))	3
11/8/2022	Google Scholar	complex PTSD AND systematic review OR meta analysis (2022)	17,100
1/20/2023	PubMed	(("stress disorders, post traumatic"[MeSH Terms] OR ("stress"[All Fields] AND "disorders"[All Fields] AND "post traumatic"[All Fields]) OR "post-traumatic stress disorders"[All Fields] OR "ptsd"[All Fields]) AND ("therapeutics"[MeSH Terms] OR "therapeutics"[All Fields] OR "treatments"[All Fields] OR "therapy"[MeSH Subheading] OR "therapy"[All Fields] OR "treatment"[All Fields] OR "treatment s"[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (2022:2022[pdat]))	183

Date	Search Method	Search Term(s)	# of Hits
1/20/2023	PubMed	((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (2023:2023[pdat]))	10
1/20/2023	PubMed	((“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (2023:2023[pdat]))	0
1/20/2023	Google Scholar	ptsd treatments for veterans AND systematic review OR meta-analysis	1400
1/23/2023	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2023:2023[pdat]))	4
2/17/2023	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]) AND (2023:2023[pdat]))	8
2/17/2023	PubMed	((“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]))	2
2/17/2023	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]))	64
2/17/2023	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((y_1[Filter]) AND (meta-analysis[Filter] OR systematicreview[Filter]) AND (alladult[Filter]))	64
2/17/2023	Google Scholar	PTSD treatments AND systematic review OR meta-analysis (published since 2023)	13,900
2/23/2023	PsycNET	PTSD AND Any Field: treatment AND Methodology: Systematic Review OR Meta Analysis AND Age Group: Adulthood (18 yrs & older) AND Peer-Reviewed Journals only AND Year: 2022 To 2023	19

Date	Search Method	Search Term(s)	# of Hits
2/28/2023	PubMed	((“n methyl 3,4 methylenedioxyamphetamine”[MeSH Terms] OR “n methyl 3 4 methylenedioxyamphetamine”[All Fields] OR “mdma”[All Fields]) AND ((“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND (“therapeutics”[MeSH Terms] OR “therapeutics”[All Fields] OR “treatments”[All Fields] OR “therapy”[MeSH Subheading] OR “therapy”[All Fields] OR “treatment”[All Fields] OR “treatment s”[All Fields])) AND (meta-analysis[Filter] OR systematicreview[Filter])	14
3/29/2023	PubMed	((“complex”[All Fields] OR “complex s”[All Fields] OR “complexant”[All Fields] OR “complexants”[All Fields] OR “complexated”[All Fields] OR “complexation”[All Fields] OR “complexations”[All Fields] OR “complexe”[All Fields] OR “complexed”[All Fields] OR “complexes”[All Fields] OR “complexing”[All Fields] OR “complexities”[All Fields] OR “complexity”[All Fields] OR “complexs”[All Fields]) AND (“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields])) AND (2023:2023[pdat])	88
3/29/2023	PubMed	(“stress disorders, post traumatic”[MeSH Terms] OR (“stress”[All Fields] AND “disorders”[All Fields] AND “post traumatic”[All Fields]) OR “post-traumatic stress disorders”[All Fields] OR “ptsd”[All Fields]) AND ((meta-analysis[Filter] OR systematicreview[Filter]) AND (2023:2023[pdat]))	91

APPENDIX J

Grid

Please refer to the Microsoft Excel® file Appendix J (XLSX 245 KB) linked separately.

APPENDIX K

Pooled Analyses from the National Center for PTSD's (2023) PTSD Repository

Research Questions

1. Are there any randomized controlled trial (RCT) studies published after 2018 for the following treatment comparisons that would alter current recommendations?

    a. CBT-mixed interventions vs. waitlist (WL) or usual care/treatment as usual (UC/TAU) [Included trials: Bryant, 2019; Efendi, 2020; Gray, 2019; Koch, 2020; Koochaki, 2018; Latif, 2021; Lehavot, 2021; McGeary, 2022a (only CBTH vs. TAU); Raabe, 2022 (only STAIR + ImRs vs. WL); van Denderen, 2018a & b (only CBT alone effect sizes, no EMDR—if available) Wagner, 2019; Zemestani, 2022]

    b. CPT vs WL or TAU [McGeary, 2022b (CPT vs. TAU); Simpson, 2022]. *Due to there being less than three trials, pooled results were not available for this comparison.*

    c. EMDR vs. WL or TAU [Included trials: Butler, 2018; Jarero, 2019; Karatzias, 2019; van Denderen, 2018a & b (only EMDR alone effect sizes, no CBT—if available); Yurtsever, 2018]

Methods

The meta-analyses were conducted by Dr. Pim Cuijpers and the National Center for PTSD colleagues using the metapsyTools package in R (version 4.1.1; Harrer et al., 2022) and RStudio (version 1.1.463 for Mac). The metapsyTools package was specifically developed for the meta-analytic project of which this study is a part. This package imports the functionality of the meta (Balduzzi et al., 2019), metafor (Viechtbauer, 2010), and dmetar (Harrer et al., 2019) packages.

Cuijpers and colleagues calculated the pooled effect sizes in several different ways, as implemented in the metapsyTools package, to explore if different pooling methods resulted in different outcomes. In our main model, all effect size data available for a comparison in a specific study were aggregated within that comparison first. These aggregated effects were then pooled across studies and comparisons. An intra-study correlation coefficient of $\rho = 0.5$ was assumed to aggregate effects within comparisons.

Cuijpers and colleagues conducted three other analyses that are implemented in the metapsyTools package to examine whether these main outcomes were robust. First, they estimated the pooled effect using a three-level "correlated and hierarchical effects" (CHE) model, which was recently proposed by Pustejovsky and Tipton (2021); parameter tests and confidence intervals of which were also calculated using robust variance estimation (RVE) to guard against model misspecification. The researchers assumed an intra-study correlation of $\rho=0.5$ for this model. Second, they pooled effects while excluding outliers, using the "non-overlapping confidence intervals" approach, in which a study is defined as an outlier when the 95% confidence interval (CI) of the effect size does not overlap with the 95% CI of the pooled effect size (Harrer et al., 2021). Third, they pooled effects while excluding influential cases as defined by the diagnostics in Viechtbauer and Cheung (2010). They also used three different methods to assess and adjust for potential publication bias (Harrer et al., 2021; Maier et al., 2022): Duval and Tweedie's trim and fill procedure (Duval & Tweedie, 2000), Rücker's 'Limit meta-analysis' method (Rücker et al., 2011) and a step function selection model (McShane et al., 2016; Carter et al., 2019).

A random-effects model was assumed for all analyses. Between-study heterogeneity variance (components) was estimated using restricted maximum likelihood. For models not fitted using RVE, they applied the Knapp-Hartung method to obtain robust confidence intervals and significance tests of the overall effect (IntHout et al., 2014). As a test of homogeneity of effect sizes, the researchers calculated the I2statistic and its 95% CI, which is an indicator of heterogeneity in percentages. A value of 0% indicates no observed heterogeneity, and larger values indicate increasing heterogeneity, with 25% as low, 50% as moderate, and 75% as high heterogeneity (Higgins et al., 2003). For the three-level model, they calculated a multilevel extension of I2, which describes the amount of total variability attributable to heterogeneity within studies (level 2)

and heterogeneity between studies (level 3) (Cheung, 2014; Harrer et al., 2019). Because I2 cannot be interpreted as an absolute measure of the between-study heterogeneity, Cuijpers and colleagues also added the prediction interval (PI) to the main analyses, which indicates the range in which the true effect size of 95% of all populations will fall (Borenstein et al., 2017; Borenstein et al., 2021).

Cuijpers and colleagues calculated the NNT based on the effect size, using the methods from Furukawa (1999) and assuming a response rate in the control groups of 0.10 (based on Cuijpers et al., 2024).

Results

The results are summarized in Table 1.

	k	*g*	CI	*p*	I^2	CI	PI	NNT
COMPARISON A								
Combined	13	1.10	[0.49; 1.71]	0.002	89.12	[83.24; 92.94]	[-1.06; 3.26]	3.05
Outliers removed	12	0.91	[0.43; 1.4]	0.002	85.59	[76.52; 91.16]	[-0.73; 2.55]	3.91
Influence Analysis	12	0.91	[0.43; 1.4]	0.002	85.59	[76.52; 91.16]	[-0.73; 2.55]	3.91
Three-Level Model (CHE)	14	1.08	[0.43; 1.73]	0.004	92.2	-	[-1.14; 3.3]	3.13
Publication bias correction								
- Trim-and-fill method	15	0.78	[0.05; 1.52]	0.039	92.13	[88.67; 94.53]	[-2.04; 3.6]	4.8
- Limit meta-analysis	13	-0.68	[-2.01; 0.65]	0.317	95.43	-	[-3.21; 1.85]	13.32
- Selection model	13	0.83	[-0.16; 1.83]	0.102	94	[83.68; 99.18]	[-1.58; 3.24]	4.41
COMPARISON C								
Combined	5	1.07	[-1.69; 3.83]	0.344	95.23	[91.5; 97.33]	[-6.5; 8.63]	3.18
Outliers removed	4	0.12	[-0.66; 0.89]	0.662	52.46	[0; 84.29]	[-1.81; 2.04]	44.93
Influence Analysis	4	0.12	[-0.66; 0.89]	0.662	52.46	[0; 84.29]	[-1.81; 2.04]	44.93
Three-Level Model (CHE)	5	1.07	[-1.66; 3.8]	0.339	97	-	[-5.53; 7.67]	3.18
Publication bias correction								
- Trim-and-fill method	5	1.07	[-1.69; 3.83]	0.344	95.23	[91.5; 97.33]	[-6.5; 8.63]	3.18
- Limit meta-analysis	5	-1.38	[-5.84; 3.07]	0.543	96.87	-	[-10.1; 7.33]	10.4
- Selection model	5	-3.26	[-13.89; 7.36]	0.547	98.75	[93.1; 99.85]	[-15.75; 9.23]	10

References

Balduzzi S., Rücker G., & Schwarzer G. (2019). How to perform a meta-analysis with R: a practical tutorial. *BMJ Mental Health, 22*(4), 153–160. https://doi.org/10.1136/ebmental-2019-300117

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2021). *Introduction to meta-analysis (3rd ed.)*. Wiley.

Borenstein, M., Higgins, J. P. T., Hedges, L. V., & Rothstein, H. R. (2017). Basics of meta-analysis: I2 is not an absolute measure of heterogeneity. *Research Synthesis Methods, 8*(1), 5–18. https://doi.org/10.1002/jrsm.1230

Carer, E. C., Schönbrodt, F. D., Gervais, W. M., & Hilgard, J. (2019). Correcting for bias in psychology: A comparison of meta-analytic methods. *Advances in Methods and Practices in Psychological Science, 2*(2), 115–144. https://doi.org/10.1177/2515245919847196

Cheung, M. W.-L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods, 19*(2), 211–229. https://doi.org/10.1037/a0032968

Cuijpers, P., Miguel, C., Ciharova, M., Harrer, M., Basic, D., Cristea, I. A., de Ponti, N., Driessen, E., Hamblen, J., Larsen, S. E., Matbouriahi, M., Papola, D., Pauley, D., Plessen, C. Y., Pfund, R. A., Setkowski, K., Schnurr, P. P., van Ballegooijen, W., Wang, Y...Karyotaki, E. (2024). Absolute and relative outcomes of psychotherapies for eight mental disorders: a systematic review and meta-analysis. *World Psychiatry, 23*(2), 267–275. https://doi.org/10.1002/wps.21203

Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*(2), 455–463. https://doi.org/10.1111/j.0006-341X.2000.00455.x

Furukawa, T. A. (1999). From effect size into number needed to treat [Letter]. *The Lancet, 353*(9165), 1680. https://doi.org/10.1016/S0140-6736(99)01163-0

Harrer, M., Cuijpers, P., Furukawa, T., & Ebert, D. D. (2019). *dmetar: Companion R package for the guide 'Doing Meta-Analysis in R'* (Version 0.0.9000) [Computer software]. Protect Lab. http://dmetar.protectlab.org/

Harrer, M., Kuper, P., & Cuijpers, P. (2022). *metapsyTools: Several R helper functions for the "metapsy" database* (Version 0.3.2) [Computer software]. Metapsy. https://tools.metapsy.org

Higgins, J. P. T., Thompson, S. G., Deeks, J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *BMJ, 327,* Article 557. https://doi.org/10.1136/bmj.327.7414.557

IntHout, J., Ioannidis, J. P. A., & Borm, G. F. (2014). The Hartung-Knapp-Sidik-Jonkman method for random effects meta-analysis is straightforward and considerably outperforms the standard DerSimonian-Laird method. *BMC Medical Research Methodology,* 14, Article 25. https://doi.org/10.1186/1471-2288-14-25

Maier, M., Vanderweele, T. J., & Mathur, M. B. (2022). Using selection models to assess sensitivity to publication bias: A tutorial and call for more routine use. *Campbell Systematic Reviews, 18*(3), Article e1256. https://doi.org/10.1002/cl2.1256

McShane, B. B., Böckenholt, U., & Hansen, K. T. (2016). Adjusting for publication bias in meta-analysis: An evaluation of selection methods and some cautionary notes. *Perspectives on Psychological Science, 11*(5), 730-749. https://doi.org/10.1177/1745691616662243

Pustejovsky, J. E., & Tipton, E. (2021). Meta-analysis with robust variance estimation: Expanding the range of working models. *Prevention Science, 23*, 425–438. https://doi.org/10.1007/s11121-021-01246-3

Rücker, G., Schwarzer, G., Carpenter, J. R., Binder, H., & Schumacher, M. (2011). Treatment-effect estimates adjusted for small-study effects via a limit meta-analysis. *Biostatistics, 12*(1), 122–142. https://doi.org/10.1093/biostatistics/kxq046

Viechtbauer, W. (2010). Conducting meta-analyses in R with metafor package. *Journal of Statistical Software, 36*(3), 1–48. https://doi.org/10.18637/jss.v036.i03

AMERICAN
PSYCHOLOGICAL
ASSOCIATION