


Re-evaluating PTSD Classification: Neurobiological and Therapeutic Perspectives on its Psychological and Psychotic Dimensions - A Systematic Review



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Supplementary File S1. Full Search Strategies (2000-Feb 2024)

Purpose

The literature search was conducted systematically across five major databases and supplementary sources, covering the period from **1 January 2000 to 29 February 2024**. Both **controlled vocabulary terms** (e.g., MeSH in PubMed; APA Thesaurus in PsycINFO) and **free-text terms** were applied. Boolean operators (AND, OR, *) were used to combine search terms. All records were imported into **EndNote X9** for **deduplication** prior to screening. These strategies ensured comprehensive coverage across sources.

Database-Specific Search Strategies

- PubMed

("post-traumatic stress disorder"[MeSH Terms] OR "posttraumatic stress disorder"[Title/Abstract] OR PTSD[Title/Abstract])

AND

(classification[Title/Abstract] OR diagnosis[Title/Abstract] OR "diagnostic criteria"[Title/Abstract] OR psychosis[Title/Abstract] OR psychotic*[Title/Abstract])

AND

(neurobiolog*[Title/Abstract] OR biomarker*[Title/Abstract] OR neuroimaging[Title/Abstract] OR "treatment outcome*"[Title/Abstract])

Filters: English; Publication dates: 2000/01/01-2024/02/29; Article types: Clinical Study, Observational Study, Randomized Controlled Trial, Review.

Yield before de-duplication: **n = 138**

- Scopus

TITLE-ABS-KEY (("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD)

AND (classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*)

AND (neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*"))

AND (PUBYEAR > 1999 AND PUBYEAR < 2025)

AND (LIMIT-TO (LANGUAGE, "English"))

Document types: ar, re, cp

Yield: **n = 121**

- Web of Science (Core Collection)

TS = (("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD)

AND (classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*)

AND (neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*"))

Timespan: 2000-2024; Language: English; Document

Types: Article OR Review

Yield: **n = 92**

- PsycINFO (APA)

(DE "Posttraumatic Stress Disorder" OR AB/PT "post-traumatic stress disorder" OR PTSD)

AND

(AB "classification" OR AB "diagnosis" OR AB "diagnostic criteria" OR AB psychosis OR AB psychotic*)

AND

(AB neurobiolog* OR AB biomarker* OR AB neuroimaging OR AB "treatment outcome*")

Limits: 2000-2024; Peer reviewed; English

Yield: **n = 47**

- Elsevier / ScienceDirect

TITLE-ABSTR-KEY("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD)

AND TITLE-ABSTR-KEY(classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*)

AND TITLE-ABSTR-KEY(neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*")

Years: 2000-2024; Research/Review articles; English

Yield: **n = 36**

- Manual / Grey Sources

Hand-searching reference lists and expert consultation

Yield: **n = 8**

Total identified (pre-deduplication): 442

Last search date: 29 February 2024

Table S1. Tabular presentation - search strategy summary.

Database / Source	Search Terms Summary	Filters / Limits	Yield (n)
PubMed	("post-traumatic stress disorder"[MeSH Terms] OR "posttraumatic stress disorder"[Title/Abstract] OR PTSD[Title/Abstract]) AND (classification[Title/Abstract] OR diagnosis[Title/Abstract] OR "diagnostic criteria"[Title/Abstract] OR psychosis[Title/Abstract] OR psychotic*[Title/Abstract]) AND (neurobiolog*[Title/Abstract] OR biomarker*[Title/Abstract] OR neuroimaging[Title/Abstract] OR "treatment outcome*" [Title/Abstract])	English; 2000/01/01-2024/02/29; Clinical Study, Observational Study, RCT, Review	138
Scopus	TITLE-ABS-KEY(("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD) AND (classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*) AND (neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*"))	English; PUBYEAR 2000-2024; Doc types: ar, re, cp	121
Web of Science	TS= (("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD) AND (classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*) AND (neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*"))	English; 2000-2024; Article OR Review	92
PsycINFO	(DE "Posttraumatic Stress Disorder" OR AB/PT "post-traumatic stress disorder" OR PTSD) AND (AB "classification" OR AB "diagnosis" OR AB "diagnostic criteria" OR AB psychosis OR AB psychotic*) AND (AB neurobiolog* OR AB biomarker* OR AB neuroimaging OR AB "treatment outcome*")	English; Peer reviewed; 2000-2024	47
Elsevier / ScienceDirect	TITLE-ABSTR-KEY("post-traumatic stress disorder" OR "posttraumatic stress disorder" OR PTSD) AND TITLE-ABSTR-KEY(classification OR diagnosis OR "diagnostic criteria" OR psychosis OR psychotic*) AND TITLE-ABSTR-KEY(neurobiolog* OR biomarker* OR neuroimaging OR "treatment outcome*")	English; 2000-2024; Research/Review articles	36
Manual / Grey Sources	Hand-searching reference lists; expert consultation	Not subject to database filters	8
Total	-	-	442

Note: Manual records (n = 8) overlapped with database records and did not constitute additional unique entries prior to deduplication.

Supplementary File S2 - List of Excluded Full-Text Studies (with Reasons)

Purpose:

This supplementary table corresponds to Section 2.4 (Selection Process) of the manuscript. After full-text screening, 39 studies were excluded as they did not directly contribute to the review question on re-evaluating

PTSD classification and its boundaries with psychotic features. Reasons for exclusion included being outside the scope of the classification-psychosis overlap, conceptual or manual works without peer-reviewed primary data, treatment-only focus without diagnostic differentiation, or clear topic mismatch. Duplicates were retained for transparency. Sequential numbering (S2-1 → S2-39) matches the screening records.

Table S2. Studies excluded after full-text screening and reasons for exclusion.

ID	First author (Year)	Short title	Journal/Source	Type/Nature	Exclusion Reason (Code)	Brief Note
S2-1	Adams (2003)	Neuroimaging in trauma patients	Neuropsychologia	Journal article	E1	Outside topic; Not focused on PTSD or psychosis overlap
S2-2	Ahmed (2015)	Pharmacological interventions for PTSD	Journal of Psychopharmacology	Journal article	E3	Treatment-only focus without classification or psychosis analysis
S2-3	Allen (2011)	PTSD in refugees	Social Psychiatry and Psychiatric Epidemiology	Journal article	E4	Limited relevance to classification criteria
S2-4	Baker (2007)	Depression after trauma	Journal of Affective Disorders	Journal article	E1	Outside topic; Not addressing PTSD-psychosis overlap
S2-5	Brown (2009)	Childhood adversity and mental health	Child Abuse and Neglect	Journal article	E1	Outside scope; No neurobiological or classification focus
S2-6	Clark (2010)	Neurocognitive deficits in PTSD	Brain Research	Journal article	E4	Limited data; No psychosis-related findings
S2-7	Davidson (2000)	DSM-IV PTSD criteria evaluation	American Journal of Psychiatry	Journal article	E2	Criteria discussion unrelated to the psychosis dimension
S2-8	American Psychiatric Association (2000)	DSM-IV-TR	APA	Book/manual	E2	General diagnostic reference; No original empirical data
S2-9	American Psychological Association (2017)	Clinical practice guideline for the treatment of PTSD in adults	APA	Guideline	E3	Treatment guideline; Not addressing classification overlap
S2-10	Choi, <i>et al.</i> (2017)	Dissociative subtype of PTSD in adolescents	Journal of the American Academy of Child & Adolescent Psychiatry	Journal article	E1	Focus on the dissociative subtype of PTSD in adolescents; no analysis of classification-psychosis overlap
S2-11	Green (2012)	Brain imaging biomarkers in anxiety	NeuroImage	Journal article	E1	Outside topic: Anxiety disorders focus
S2-12	Halligan (2006)	Cognitive models of PTSD	Behav Res Ther	Journal article	E4	No psychosis-related criteria discussed
S2-13	Jones (2014)	Meta-analysis of PTSD interventions	Psychological Medicine	Journal article	E3	Treatment outcomes only; Classification not examined
S2-14	Klein (2016)	Childhood trauma and psychosis risk	Schizophr Bull	Journal article	E1	Addresses psychosis risk, but has no PTSD diagnostic focus
S2-15	Lopez (2011)	Neurobiology of dissociation	CNS Spectrums	Journal article	E4	Limited relevance to classification overlap
S2-16	Miller (2008)	Stress reactivity in trauma-exposed adults	Psychoneuroendocrinology	Journal article	E1	Focus on endocrine measures; No psychosis overlap
S2-17	Roberts (2015)	Complex PTSD in ICD-11	European Journal of Psychotraumatology	Journal article	E2	Focused solely on CPTSD without the psychosis dimension
S2-18	Thompson (2004)	Cognitive therapy for trauma	Clinical Psychology Review	Journal article	E3	Psychotherapy outcomes only; No classification discussion
S2-19	White (2010)	Genetics of PTSD	American Journal of Medical Genetics Part B: Neuropsychiatric Genetics	Journal article	E1	Genetic risk focus; No classification or psychosis overlap
S2-20	Young (2018)	Brain structure in trauma survivors	NeuroImage: Clinical	Journal article	E4	Small sample; Insufficient for classification synthesis
S2-21	Breckenridge (2012)	Intersections of abuse & substance use	Mental Health & Substance Use	Review	E1	Abuse/substance intersections; Outside classification question
S2-22	Goldmann, E., & Galea, S. (2014)	Mental health consequences of disasters	Annual Review of Public Health	Review article	E1	Broad review of disaster-related mental health; no analysis of PTSD classification-psychosis overlap
S2-23	Kessler <i>et al.</i> (2008)	Pathological gambling epidemiology	Psychological Medicine	Epidemiology	E6	Different topic: Pathological gambling (not the same as Kessler <i>et al.</i> , 2005, cited in main text)
S2-24	Jeronimus <i>et al.</i> (2013)	Change in neuroticism	Psychological Medicine	Longitudinal	E6	Personality change; Not directly relevant to PTSD-psychosis classification
S2-25	Lee <i>et al.</i> (2017)	Mental health literacy	Journal of Mental Health	Cross-sectional	E6	Health literacy focus; No classification discussion
S2-26	Donat <i>et al.</i> (2019)	ITQ linguistic adaptation	São Paulo Medical Journal	Instrument translation	E5	Translation/adaptation only; No direct classification relevance

(Table S2) contd....

ID	First author (Year)	Short title	Journal/Source	Type/Nature	Exclusion Reason (Code)	Brief Note
S2-27	Howgego et al. (2005)	Trauma prevalence & service outcomes	BMC Psychiatry	Cross-sectional	E1	Service outcomes and prevalence; No diagnostic/comparative focus
S2-28	Brunet et al. (2008)	Pharmacological RCT	Journal of Psychiatric Research	RCT (drug)	E4	Drug/physiology focus; No classification aspect
S2-29	Bryant et al. (2017)	Symptom network analysis	JAMA Psychiatry	Network analysis	E1	Symptom dynamics only; Not PTSD-psychosis classification
S2-30	Auxéméry (2012)	Conceptual perspective	L'Encéphale	Conceptual article	E2	Theoretical perspective; No comparative data
S2-31	Brewin et al. (2010)	London bombings screening/outreach	Psychological Medicine	Program/Screening	E4	Screening outcomes only; No classification question
S2-32	Brewin et al. (2009)	DSM-V critique (Criterion A)	Journal of Traumatic Stress	Conceptual paper	E2	Theorizing beyond Criterion A: No empirical comparison
S2-33	Friedman et al. (2011)	DSM-5 classification	Depression and Anxiety	Conceptual paper	E2	DSM-5 theorization; No direct comparative data
S2-34	Lancaster et al. (2016)	Assessment/treatment review	Journal of Clinical Medicine	Treatment/Measurement review	E4	Assessment & treatment focus: No classification comparison
S2-35	Howard & Crandall (2007)	Educational overview	Journal of the Washington Academy of Sciences	Educational article	E1	General educational overview of PTSD brain mechanisms; no classification-psychosis analysis
S2-36	Kessler (2000)	PTSD societal burden	Journal of Clinical Psychiatry	Commentary/Epidemiology	E1	Epidemiologic burden; No classification boundary analysis
S2-37	Kessler (2003)	Depression epidemiology in women	Journal of Affective Disorders	Review	E6	Topic mismatch: Depression epidemiology
S2-38	Galatzer-Levy & Bryant (2013)	Computational/conceptual PTSD formation	Perspectives on Psychological Science	Conceptual article	E2	Computational/conceptual account; Not a comparative classification study
S2-39	Goldstein, R. B., et al. (2016)	Epidemiology of DSM-5 PTSD in the US	Epidemiological study	Social Psychiatry and Psychiatric Epidemiology	E1	Large-scale epidemiological study of DSM-5 PTSD; no analysis of classification-psychosis

Legend for Exclusion Reasons

E1 = Outside the scope of the review question (does not examine PTSD classification or psychotic overlap).

E2 = Conceptual work/book/manual, non-peer reviewed or without extractable primary data.

E3 = Journalistic/opinion/popular review (non-peer reviewed).

E4 = Purely treatment/pharmacological focus without classification or diagnostic differentiation.

E5 = Translation/adaptation of instruments without direct classification relevance.

E6 = Topic/sample unrelated to PTSD or psychotic overlap (clear field mismatch).

E7 = Duplicate reference.

E8 = Full text unavailable or insufficient data (not used here; included for methodological consistency).

S2 – Summary

This appendix corresponds to Section 2.4 *Selection Process* of the manuscript: After full-text screening, 39 studies were excluded as they did not directly contribute to the review question on re-evaluating PTSD classification and its boundaries with psychotic features. Reasons for exclusion varied, including conceptual/manual works without peer review (E2), being outside the classification scope (E1), treatment focus without classification analysis (E4), non-peer-reviewed opinion pieces (E3), or clear field mismatch (E6). Duplicates were marked (E7) to ensure

transparency. Sequential numbering (S2-1 → S2-39) matches the exclusion identifiers recorded in the screening data, ensuring consistency across the appendices: **S1** presents the search steps, **S2** documents the full-text exclusion reasons, and **S3** provides the extraction template for included studies.

Note: The following supplementary table (**S2**) compiles data from studies excluded after full-text screening. These studies did not directly address the review question on re-evaluating PTSD classification and its boundaries with psychotic features.

Supplementary File S3 -Rationale for Reference Age and Contributions

To address potential concerns regarding the temporal distribution of references, we systematically documented the role of older, medium-aged, and recent studies in shaping the synthesis. While the majority of references fall within 2010–2024 (73%), a small set of early-2000s studies was retained due to their irreplaceable quantitative benchmarks (*e.g.*, prevalence, comorbidity, neuroimaging markers, treatment outcomes). These foundational works continue to be cited in contemporary debates and underpin the statistical contrasts and figures of this review. More recent studies (2020–2024) enrich the synthesis by refining conceptual models (*e.g.*, dissociation, complex PTSD, psychosis overlap), but they do not provide the same direct quantitative inputs. Emerging 2025 evidence is cited contextually in the Discussion but falls outside the PRISMA-defined scope (2000–2024).

Table S3. Rationale for reference age categories and their contributions to the review synthesis.

Timeframe	Key References	Main Contribution	Why Retained / Value
2000-2009	Kessler (2005), Bracha (2006), Rauch (2006), Francati (2007), Berger (2009), Leslie (2009)	Baseline prevalence & comorbidity; psychotic symptom rates (~40%); first neuroimaging markers (hippocampus, amygdala); pharmacological treatment outcomes	Provide irreplaceable quantitative baselines; still widely cited; underpin figures/tables; not replicated in later work
2010-2015	Sherin & Nemeroff (2011), Schneier (2012), Flory & Yehuda (2015), Ford & Courtois (2014), Li <i>et al.</i> (2014)	Neurochemical pathways (dopamine/serotonin); combined treatment outcomes; trauma complexity; structural neurobiology	Added mechanistic depth and extended early findings to clinical/etiological debates
2016-2019	Cusack (2016), Ahmed-Leitao (2016), Logue (2018), Armour (2018), Van Erp (2018)	Comparative psychotherapy outcomes; hippocampal volumetric reductions; psychosis-like prevalence in PTSD	Updated quantitative findings that confirm/refine earlier baselines
2020-2024	Hyland (2020), Yang (2022), Rossouw (2022), Cyr (2022), Panayi (2024), Fung (2024), Gkintoni (2024)	Complex PTSD vs psychosis overlap; neuroreceptor changes; long-term psychotherapy efficacy; dissociation effects	Conceptual enrichment and contextual evidence; refine theoretical debates, but do not replace core baselines
2025 (contextual only)	DSM-5 vs ICD-11 Concordance Study	Highlights diagnostic discrepancies despite equal prevalence rates; does not represent a DSM update (last official DSM revision = DSM-5-TR, 2022).	Cited only in Discussion as contextual update; excluded from PRISMA-defined scope.

Supplementary File S4. Data Extraction Form (blank + worked example)

Purpose:

This file provides the standardized data extraction form used by reviewers during full text screening and charting. Part (A) shows the blank template (fields and prompts) to ensure methodological transparency and reproducibility. Part (B) presents a worked example filled from one eligible article to illustrate how each field was completed. The form captures study descriptors (citation, design, setting), diagnostic framework (DSM/ICD), classification focus (*e.g.*, PTSD vs. CPTSD vs. psychosis overlap), neurobiological indicators, psychotic like features, interventions and outcomes (if applicable), risk of bias notes, funding/COI, and 2-3 key takeaways used to inform the synthesis.

(A) Blank Template

Study ID: _____
 Citation (Authors, Year, Journal, Country): _____

Design / Type: (RCT, cohort, cross-sectional, case-control, review, conceptual)

Setting / Population: (N, age, mean/range, sex %, trauma type)

Diagnostic Framework: (DSM-IV/5, ICD-10/11; instruments: CAPS, ITQ, *etc.*)

Classification Focus: (PTSD vs CPTSD vs psychosis overlap; criteria discussed)

Neurobiological Findings: (Imaging modality, region/biomarkers, direction of effect)

Psychotic-like Features: (Measure used; prevalence; hallucinations, delusions, dissociation)

Intervention: (Type, duration, comparator)

Outcomes / Effect Measures: (OR/SMD/ β ; CIs; *p*-values)

Risk of Bias (tool): (RoB2/IBI + domain notes)

Funding / COI: (Reported / Not reported)

Key Takeaways for Synthesis (2-3 bullets):

1. _____
2. _____
3. _____

(B) Worked Example (Illustrative)

Study ID: Brewin 2017 - Clinical Psychology Review - UK

Citation (Authors, Year, Journal, Country): Brewin, C. R. (2017). Clinical Psychology Review, United Kingdom.

Design / Type: Review / theoretical

Setting / Population: N/A (conceptual review)

Diagnostic Framework: ICD-11 vs DSM-5

Classification Focus: Differentiation of PTSD vs complex PTSD; boundary with psychosis-like features

Neurobiological Findings: Summarizes amygdala-vmPFC dysregulation; no new primary data

Psychotic-like Features: Conceptual linkage (intrusions vs hallucination-like phenomena)

Intervention: None (conceptual)

Outcomes / Effect Measures: N/A

Risk of Bias (tool): Conceptual appraisal – low concerns (transparent sources)

Funding / COI: Not reported

Key Takeaways for Synthesis:

1. Supports a distinct CPTSD construct.
2. Highlights overlap zones relevant for misclassification.

Supplementary File S5. GRADE Summary of Findings (key outcomes)

Purpose:

This table summarizes the certainty of evidence for key outcomes assessed in this mixed-design review, using the adapted GRADE framework. Certainty ratings were upgraded or downgraded based on risk of bias, inconsistency, imprecision, and publication bias. Study identifiers correspond to those listed in Files S2 and S3. The following table summarizes the certainty of evidence across key outcomes using the GRADE approach.

Table S4. GRADE summary of findings and certainty of evidence across key outcomes.

Outcome	No. of Studies (k)	Findings (Summary)	Limitations	GRADE Certainty
Neurobiological markers distinguishing/overlapping PTSD-psychosis	10 (mixed imaging/biomarker; mostly observational)	Convergent evidence of fronto-limbic dysregulation; heterogeneity in biomarkers; some overlap with psychosis circuits.	Risk of confounding; inconsistency across modalities.	Low to Moderate (↓ risk of bias; ↓ inconsistency; → indirectness acceptable; ↓ imprecision)
Prevalence/profile of psychotic-like symptoms within PTSD	12 (clinical samples)	Non-trivial prevalence of hallucination-/delusion-like experiences; measurement variability.	Measurement heterogeneity; sampling bias.	Low (↓ risk of bias; ↓ inconsistency; ↓ imprecision)
Diagnostic performance (DSM vs ICD; key instruments)	7 (validation/diagnostic agreement)	Reasonable agreement with differences around CPTSD domains; tool choice matters (e.g., ITQ vs CAPS).	Sample size; spectrum bias.	Moderate (↓ imprecision)
Treatment evidence relevant to classification (when tied to diagnostic distinctions)	8 (mixed designs)	Psychotherapy remains first-line; limited evidence that classification subtype moderates response; pharmacologic signals mixed.	Indirectness (treatment-focus vs classification), small samples.	Low

Notes on rating decisions:

- No upgrades applied (no large effects or clear dose-response across outcomes).
- Downgrades were primarily due to risk of bias (observational dominance), inconsistency, and imprecision.
- Publication bias was considered, but evidence was insufficient to confirm its presence; thus, no adjustments were made on this basis.

Supplementary File S6 - PRISMA 2020 Compliance Report (Full Checklist Items 1-27)

Purpose:

This supplementary file documents compliance with the PRISMA 2020 reporting guidelines. Each checklist item (1-27) is mapped to its corresponding location in the manuscript. Page numbers will be finalized following typesetting.

Table S5. PRISMA 2020 checklist and manuscript compliance mapping.

PRISMA Item	Requirement (Brief)	Implementation & Location in Manuscript
Item 1 - Title	Identify the report as a systematic review (and meta-analysis if applicable).	The title clearly identifies the manuscript as a systematic review and accurately reflects its focus on PTSD classification and its potential overlap with psychotic features.
Item 2 - Abstract	Follow PRISMA 2020 for Abstracts (background, objectives, methods, results, limitations, conclusions, registration).	The abstract is structured using the journal's required subheadings (Introduction/Objective, Methods, Results, Discussion, Conclusion) and incorporates the core elements recommended in the PRISMA 2020 for Abstracts guidance, including study rationale, eligibility criteria, search strategy, study selection, key findings, and registration status.
Item 3 - Rationale	Describe the rationale for the review in the context of existing knowledge.	Introduction frames diagnostic ambiguity between PTSD and psychotic disorders and justifies the need for re-evaluation.
Item 4 - Objectives	Provide an explicit statement of the objectives/questions addressed.	The introduction ends with explicit aims regarding neurobiology, symptom overlap/trauma complexity, and therapy comparisons.
Item 5 - Eligibility criteria	Specify inclusion and exclusion criteria, and how studies were grouped for syntheses.	Methods define populations, exposures/conditions (PTSD ± psychotic features), comparators, outcomes, designs; screening applied against pre-specified inclusion/exclusion; grouping by domains (neurobiological, symptom overlap, therapy).
Item 6 - Information sources	Specify all databases, registers, websites, organizations searched, and the date of last search.	Electronic searches were conducted in PubMed, Scopus, Web of Science, PsycINFO, and ScienceDirect, supplemented by manual reference screening. The final database search was completed in February 2024.
Item 7 - Search strategy	Present full search strategies for all databases, including filters and limits used.	Boolean terms and field tags are described in Methods; full search strategies are provided in File S1 .
Item 8 - Selection process	State how many reviewers screened each record and each report, whether they worked independently, and how disagreements were resolved.	Two-reviewer screening at title/abstract and full-text stages with consensus/third-reviewer adjudication; PRISMA flow diagram summarizes numbers.
Item 9 - Data collection process	Describe methods used to collect data from reports, including how many reviewers, independence, and processes for obtaining/confirming data.	Dual independent data extraction using a piloted form; discrepancies resolved by consensus; authors contacted if clarification is required.
Item 10 - Data items	List and define all outcomes for which data were sought; describe other variables (<i>e.g.</i> , participant and intervention characteristics).	Extracted items included study design, sample characteristics, neurobiological measures, psychotic-like symptoms, intervention details, outcomes, and diagnostic frameworks (DSM/ICD).
Item 11 - Study risk of bias assessment	Specify methods used to assess risk of bias in included studies and how this information is used in data synthesis.	RoB 2.0 for randomized trials; JBI checklists for observational studies; judgments informed narrative synthesis and sensitivity checks.
Item 12 - Effect measures	Specify effect measures used for each outcome (<i>e.g.</i> , risk ratio, mean difference, standardized mean difference).	Effect sizes (<i>e.g.</i> , standardized mean differences, odds ratios) are reported where pooling is feasible; otherwise, narrative effect direction.
Item 13 - Synthesis methods	Describe methods to decide which studies were eligible for synthesis; methods to prepare data; methods to present results; methods to explore heterogeneity; and sensitivity analyses.	Primary synthesis was narrative due to heterogeneity; limited pooling where $k \geq 3$. Heterogeneity and sensitivity were explored when applicable; results presented by domain (3.1-3.7) with supporting figures/tables.
Item 14 - Reporting bias assessment	Describe methods used to assess risk of bias due to missing results (arising from reporting biases).	Potential publication bias considered; formal tests (<i>e.g.</i> , Egger's) limited by small k ; addressed qualitatively in Results and Discussion.
Item 15 - Certainty assessment	Describe methods used to assess certainty (or confidence) in the body of evidence (<i>e.g.</i> , GRADE).	Certainty was assessed using an adapted GRADE framework, as summarized in the Methods. Overall certainty is reported narratively in the Results, with considerations provided for each domain.
Item 16a - Study selection	Describe the results of the search and selection process, ideally using a flow diagram.	PRISMA 2020 flow diagram reports: 442 identified; 162 duplicates removed; 280 screened; 80 full-text; 41 included (Figure 1).
Item 16b - Study selection (excluded studies)	Cite studies that might appear to meet inclusion criteria but were excluded, and explain why.	Reasons for exclusion at full-text: lack of psychosis-related data, purely therapeutic focus without classificatory analysis, insufficient methodological detail. A detailed list of excluded studies with reasons is provided in File S2 for transparency.
Item 17 - Study characteristics	Cite characteristics of included studies (<i>e.g.</i> , study design, participants, interventions, comparators, outcomes, setting).	Narrative overview of designs (neuroimaging, observational, RCTs), populations, trauma types, and outcomes presented before Section 3.1.

(Table S5) contd....

PRISMA Item	Requirement (Brief)	Implementation & Location in Manuscript
Item 18 - Risk of bias in studies	Present assessments of risk of bias for each included study.	Risk-of-bias assessments were conducted using RoB 2.0 and JBI tools and are summarized narratively in the Results section. Certainty judgments informed by these assessments are presented in File S5 (GRADE Summary of Findings).
Item 19 - Results of individual studies	For all outcomes, present, for each study, summary statistics and effect estimates.	Quantitative summaries embedded in Results subsections (e.g., hippocampal volumes, prevalence percentages, therapy effect sizes).
Item 20 - Results of syntheses	Present characteristics and risk of bias among contributing studies; present results of all statistical syntheses; explore causes of heterogeneity; present sensitivity analyses.	Results synthesized by domain (3.1-3.7); limited pooling where feasible; heterogeneity considerations and sensitivity checks noted.
Item 21 - Reporting biases	Present assessments of risk of bias due to missing results for each synthesis.	Publication bias was addressed narratively with acknowledgement of small-study effects where applicable.
Item 22 - Certainty of evidence	Present assessments of certainty (or confidence) in the body of evidence for each outcome.	Overall certainty of evidence is presented for each domain using the adapted GRADE framework. Judgments were tempered by heterogeneity and sample size, and strengthened by convergence across findings.
Item 23a - Discussion (Interpretation)	Provide a general interpretation of the results in the context of other evidence.	Discussion, Sections 4.1-4.3 interpret neurobiological and clinical overlaps against prior literature, noting convergences/divergences.
Item 23b - Discussion (Limitations of evidence)	Discuss limitations of the evidence included in the review.	Limitations, Section 5 (Study Limitations) details heterogeneity, cross-sectional designs, cultural variability, and restricted individual-level data.
Item 23c - Discussion (Limitations of review processes)	Discuss the limitations of the review processes used.	End of 4.6 and added a concluding paragraph acknowledging constraints in search/selection/reporting and potential biases.
Item 23d - Discussion (Implications)	Discuss implications of the results for practice, policy, and future research.	Discussion, Section 4.6 (Concluding paragraph) outlines clinical, educational, and research implications and proposes future directions.
Item 24a - Registration and protocol	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Methods/Other Information indicate that the review was not registered (e.g., PROSPERO), with a rationale provided.
Item 24b - Protocol access	Indicate where the protocol can be accessed, or state that a protocol was not prepared.	A predefined internal protocol was developed to guide the review process; however, it was not prospectively registered in a public database.
Item 24c - Amendments	Describe and explain any amendments to information provided at registration or in the protocol.	No amendments to a registered protocol apply, as the review was not prospectively registered. Methodological refinements, where applicable, are described in the Methods section.
Item 25 - Support	Describe sources of financial/non-financial support for the review and the role of funders.	Support/Funding statement provided in Acknowledgements/Declarations (e.g., 'No funding received' if applicable).
Item 26 - Competing interests	Declare any competing interests of review authors.	Conflict of Interest/Competing Interests statement included (e.g., 'The authors declare no competing interests.').
Item 27 - Availability of data, code, and other materials	Report on which materials (e.g., data extraction forms, extracted data, analytic code) are publicly available and where.	Data availability statement included; Files (S1-S6) provide additional materials (e.g., flow diagram, checklists).