

Article

EMDR Interventions for Acute Stress: A Systematic Review

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ARTICLE INFO

Received: 05/08/2025
Accepted: 12/10/2025

Keywords:

EMDR
Early interventions
Acute trauma
PTSD
Emergency settings
Clinical effectiveness
Adapted protocols
Systematic review

ABSTRACT

This systematic review analyzes the available empirical evidence on the efficacy of early interventions based on Eye Movement Desensitization and Reprocessing (EMDR) applied to adults within three months of exposure to potentially traumatic events. We included 14 studies with diverse methodological designs, using abbreviated versions of the standard protocol and specific adaptations in diverse contexts (such as sexual violence, terrorism, natural disasters, armed conflicts, medical hospitalization and workplace violence). Overall, the results show a significant reduction in symptoms of post-traumatic stress disorder and psychological distress after the intervention. The dissociative symptoms were only addressed in one study. Although clearly conditioned by the difficulties inherent in research in emergency contexts, the methodological quality of the studies was mostly low, due to limited randomization, small sample sizes, and short follow-up periods. Despite these limitations, the findings suggest that EMDR protocols adapted for acute stress could be a promising alternative. The need for more rigorous controlled studies, with greater statistical power and longitudinal follow-up, is underlined to validate their efficacy and optimize their implementation in clinical and community contexts.

Intervenciones de EMDR Para Estrés Agudo: Una Revisión Sistemática

RESUMEN

Esta revisión sistemática analiza la evidencia empírica disponible sobre la eficacia de intervenciones tempranas basadas en Desensibilización y Reprocesamiento por Movimientos Oculares (EMDR) aplicadas a adultos dentro de los tres meses posteriores a la exposición a eventos potencialmente traumáticos. Se incluyeron 14 estudios con diseños metodológicos diversos, que emplearon versiones abreviadas del protocolo estándar y adaptaciones específicas en contextos diversos (como violencia sexual, terrorismo, desastres naturales, conflictos bélicos, hospitalización médica y violencia laboral). En general, los resultados muestran una reducción significativa de síntomas de trastorno de estrés postraumático y distrés psicológico tras la intervención. El abordaje de los síntomas disociativos solo lo realizó un estudio. Aunque claramente condicionado por las dificultades inherentes a investigar en contextos de emergencia, la calidad metodológica de los estudios fue en su mayoría baja, debido a la limitada aleatorización, tamaños muestrales reducidos y breves periodos de seguimiento. A pesar de estas limitaciones, los hallazgos sugieren que los protocolos de EMDR adaptados para estrés agudo podrían ser una alternativa prometedora. Se subraya la necesidad de estudios controlados más rigurosos, con mayor potencia estadística y seguimiento longitudinal, que permitan validar su eficacia y optimizar su implementación en contextos clínicos y comunitarios.

Palabras clave:

EMDR
Intervenciones tempranas
Trauma agudo
Tept
Contextos de emergencia
Eficacia clínica
Protocolos adaptados
Revisión sistemática

Cite as: Ballesteros, Y., Fiebach, H.A., Trucharte, A., Contreras, A. & Valiente, C. (2025). EMDR Interventions for acute stress: A systematic review. *Revista de Psicoterapia*, 36(132), 13-21. <https://doi.org/10.5944/rdp.v36i132.45968>

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Introduction

Following exposure to a potentially traumatic event, individuals often experience a wide range of psychological responses. While many individuals demonstrate resilience and recover spontaneously without long-term consequences (Bonanno, 2004; Bonanno et al., 2011), a significant number of people develop acute psychological distress. If left untreated this may evolve into further psychopathology, such as depression, generalized anxiety disorder, substance use disorders, or dissociative symptoms (Brewin et al., 2000; McGuire et al., 2014).

In the acute phase following trauma, it is common to observe an intense clinical reaction known as Acute Stress Disorder (ASD). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013), ASD is diagnosed when an individual has been exposed, directly or indirectly, to a potentially traumatic event (PTE) and exhibits at least nine symptoms across five categories within 3 days to 1 month after the exposure. Such symptoms include intrusion (e.g., recurrent, involuntary, and distressing memories or disturbing dreams related to the event), negative mood (e.g., persistent inability to experience positive emotions), dissociation (e.g., altered perceptions of reality, dissociative amnesia, or flashbacks), avoidance (e.g., efforts to avoid reminders of the trauma, such as thoughts, conversations, places, or people), and arousal (e.g., intense psychological distress or marked physiological reactions to trauma-related cues).

ASD might not only cause significant functional impairment in the short term, but it is also considered a key predictor of the later development of Post-Traumatic Stress Disorder (PTSD). As evidenced by longitudinal studies, a substantial proportion of individuals with ASD develop PTSD in the absence of early intervention. (Bryant, 2011; National Center for PTSD, 2023). These findings highlight the importance of implementing early interventions following trauma exposure, which have gained increasing relevance as a key preventive strategy against PTSD and to reduce the risk of chronicity. The primary goal of such early interventions is to disrupt the consolidation of potentially dysfunctional memories after the PTE and thereby promote a more adaptive integration of the traumatic experience (McGaugh, 2004; Schauer et al., 2011).

To date, several international clinical guidelines, such as those of the National Institute for Health and Care Excellence (NICE, 2018), the American Psychiatric Association (APA, 2017), and the World Health Organization (WHO, 2013), have recognized the effectiveness of various trauma-focused interventions for the treatment of PTSD, including Cognitive Processing Therapy (CPT), Prolonged Exposure (PE), and Eye Movement Desensitization and Reprocessing (EMDR).

However, recommendations for their use in the acute phase trauma, namely in the management of ASD, are more limited and less consistent (Bisson et al., 2019; Phelps et al., 2022; VA/DoD, 2023). Some guidelines, such as those from Phoenix Australia (Phelps et al., 2022), recommend trauma-focused cognitive-behavioral interventions within the first three months following the event. However, they do not provide a strong recommendation for the use of EMDR during this phase due to the lack of robust evidence in early intervention contexts. Similarly, the guidelines of the International Society for Traumatic Stress Studies (ISTSS;

Bisson et al., 2019) acknowledge the efficacy of EMDR for treating PTSD but do not issue clear recommendations or include it among the suggested interventions for managing ASD or in the immediate weeks after trauma exposure. Likewise, the U.S. Department of Veterans Affairs and Department of Defense Clinical Practice Guideline (VA/DoD, 2023), one of the most recent and detailed guidelines, does not include EMDR among the recommended interventions for the treatment of ASD. Specifically, it recommends only trauma-focused cognitive-behavioral therapy as an intervention for managing ASD and as a preventive strategy to reduce the risk of subsequent PTSD (VA/DoD, 2023, p. 56). This position is based on a systematic review of the scientific evidence conducted using the Grading of Recommendations Assessment, Development and Evaluation framework, which evaluates the quality of evidence and the strength of clinical recommendations, concluding that, to date, there is insufficient high-quality evidence to support the use of EMDR in acute post-traumatic phases. In contrast, the same guideline issues a strong recommendation for the use of EMDR in the treatment of established PTSD, ranking it at the same level as CPT and PE (VA/DoD, 2023, p. 67).

The Phoenix Australia guideline (Phelps et al., 2022) adopts a more nuanced perspective on early psychological interventions. It differentiates between *universal interventions*, aimed at all individuals exposed to a potentially traumatic event, and *indicated interventions*, focused on those already presenting post-traumatic symptoms. Regarding *universal interventions*, it issues a conditional recommendation against the use of psychological debriefing, whether individual or group-based, suggesting instead the provision of information, emotional support, and practical assistance (Phelps et al., 2022). With respect to *indicated interventions* for individuals already presenting ASD symptoms, the guideline strongly recommends a stepped-care model and conditionally favors both trauma-focused cognitive-behavioral therapy and brief EMDR (one to three sessions) (Phelps et al., 2022).

As the current literature is tentative, it underscores the need for more rigorous clinical research to evaluate the effectiveness of EMDR protocols specifically adapted for acute trauma. In this line, it is worth highlighting that several modifications of the standard protocol have been developed for use within the first hours, days, or weeks following a traumatic event. These include the EMDR Protocol for Recent Critical Incidents (EMDR-PRECI; Jarero et al., 2015; Jarero et al., 2011) designed for immediate individual interventions after recent traumatic events; the EMDR Integrative Group Treatment Protocol for Ongoing Traumatic Stress (EMDR-IGTP-OTS; Jarero & Artigas, 2016) aimed at contexts of mass or prolonged trauma; and the Recent Traumatic Episode Protocol (R-TEP; Shapiro and Laub, 2008) which focuses on individual interventions for recent trauma with greater structural containment. Although some preliminary studies have shown promising results regarding the effectiveness of these protocols in the context of recent trauma, their clinical application still lacks sufficient empirical support to be systematically integrated into official guidelines (Phelps et al., 2022; VA/DoD, 2023).

Therefore, the present systematic review aims to comprehensively examine the available evidence on the application of EMDR in the early stages, that is, less than 3 months following a PTE. While previous systematic reviews have assessed the efficacy of EMDR

as an early intervention (Torres-Giménez et al., 2024), to date, no previous studies provide an in-depth analysis of the specific characteristics of EMDR-derived protocols adapted for the acute post-trauma stage. In this sense, we aimed to systematically review empirical studies that include any adaptation of the EMDR protocol for different types of recent PTE, with a particular focus on protocol characteristics, context of application, and associated clinical outcomes. The findings of this review are expected to provide greater clarity on the role of EMDR as an early intervention tool, identify research gaps, and contribute to improving clinical and public health strategies and knowledge aimed at mitigating the psychological impact of recent traumatic events.

Method

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al. 2009).

Eligibility Criteria

We included studies that met the following criteria: (1) Included human adults participants exposed to a potentially traumatic event (PTE); (2) Evaluated an early EMDR intervention (standard or adapted EMDR-based protocol) delivered within three months after the traumatic exposure; (3) Reported quantitative outcomes on either PTSD or ASD, anxiety, or acute stress symptoms. Studies were excluded if they: (1) lacked quantitative results or only reported qualitative findings; (2) were not written in English, German or Spanish; (3) did not provide full-text access. Other systematic reviews and meta-analyses were excluded. Given that this study aimed to provide a comprehensive synthesis of existing early EMDR protocols applied within the acute phase following trauma, no restrictions were imposed on the type of traumatic event, study design, or population characteristics.

Search Strategy and Information Resources

A systematic search was conducted in PubMed and PsycINFO databases. Filters were applied to limit results to peer-reviewed scientific articles published between 2000 and 2025. Additionally, manual reference checks and complementary searches through Google Scholar were performed to ensure the inclusion of all potentially relevant studies. The full search strategies were:

Pubmed. (((((((((((early[Title/Abstract]) OR (acute[Title/Abstract])) AND (post-traumatic stress[Title/Abstract])) OR (stress disorder[Title/Abstract])) OR (trauma*[Title/Abstract])) OR (acute trauma[Title/Abstract])) OR (acute stress[Title/Abstract])) OR (acute stress disorder[Title/Abstract])) OR (stress[Title/Abstract])) OR (acute posttraumatic[Title/Abstract])) AND (EMDR"[Title/Abstract]) OR (eye movement desensitization[Title/Abstract] AND reprocessing[Title/Abstract])) OR (eye movement desensitization reprocessing[Title/Abstract])))

PsycINFO. abstract((early OR acute) AND ("post-traumatic stress" OR "stress disorder" OR trauma* OR "acute trauma" OR "acute stress" OR "acute stress disorder" OR stress OR "acute posttraumatic")) AND ("EMDR" OR "eye movement desensitization and reprocessing" OR "eye movement desensitization reprocessing"))

Study Selection

After removing duplicates, three reviewers (AT, CV and HF) independently screened the titles and abstracts of all retrieved records. In a first stage, studies meeting inclusion criteria or those with insufficient information for a clear decision were advanced to the second stage consisting of a full-text review. Any disagreements were resolved through discussion and consensus.

Data Extraction and Synthesis

Four reviewers (AC, CV, HF, and YB) independently extracted the following data from each included study: (1) authors and year of publication; (2) country; (3) study design: type, arms, groups; (4) sample characteristics: size, gender, age; type of trauma; (5) outcomes assessed: PTSD, Distress, Dissociation; (6) intervention details: name of intervention, delivery format (individual vs. group; in-person vs. online); length in weeks (time passed during study participation), number of sessions, duration of sessions in minutes.

Due to the heterogeneity of interventions, study designs, and outcome measures, a narrative synthesis of findings was conducted rather than a meta-analysis.

Quality Assessment and Risk of Bias

Two reviewers (HF and AT) independently assessed the risk of bias for all included studies. We used the revised Cochrane tool for assessing risk of bias in randomised trials (RoB-2) (Sterne et al., 2019). RoB-2 evaluates five domains of bias: (1) bias arising from the randomization process, (2) bias due to deviations from the intended intervention, (3) bias due to missing outcome data, (4) bias in outcome measurement, and (5) bias in the selection of the reported result. Although RoB-2 is a robust tool for assessing the risk of bias, it does not directly account for aspects such as statistical power analysis or sample size, which are important for evaluating the methodological quality and robustness of the findings, thereby ensuring greater reliability, validity, and generalizability. For this reason, we added an additional domain: (6) power analysis or $N \geq 50$ (adequate if a power analysis was reported and/or if at least 50 participants were included in the analysis). RoB-2 categorizes results into three levels: low risk (+), high risk (−), and some concerns (!). In our case, each criterion was scored as 0 (high risk of bias), 1 (low risk of bias), or 0.5 (some concerns). This approach allowed us to calculate a summation score for each study, providing an overview of its methodological quality. For the additional criterion power analysis or $N \geq 50$, we assigned 1 if both aspects were met, 0.5 if only one was met, and 0 if neither was present. Studies were rated as high quality when five or six criteria were fulfilled (low overall risk of bias), moderate quality when three or four criteria were fulfilled (moderate risk of bias), and low quality when two or fewer criteria were met (high overall risk of bias). It is important to note that the category some concerns indicates potential issues that might affect the results, but not to an extent that would justify classifying the study as high risk of bias. Therefore, while the total score offers a general overview of methodological quality, it is still crucial to consider the distribution of scores across the different domains for a more nuanced interpretation.

Results

Study Selection

The flow of studies through the study selection phases is shown in Figure 1. A total of 14 articles were included in this systematic review.

Data Extracted

All detailed information extracted from the included studies are depicted in Table 1.

Year of Publication and Country

The search yielded 14 studies published between 2006 and 2023, from Europe (France, Netherlands, United Kingdom, Italy), America (Mexico, United States), and Oceania (Australia).

Study Design

The 14 studies employed diverse methodological designs, including 4 randomized controlled trials (RCT that is, studies in which participants are randomized to at least one experimental group and one control group), 6 pre-post studies (three of them without control group and the remaining three without randomization of participants to groups); 2 case studies and 2 retrospective studies.

Sample Characteristics

The total sample studied in this systematic review is 1,090 participants, ranging from 1 case study with 1 participant (Wesson et al., 2009), 7 studies with a sample size of less than 50,

and 5 studies with a sample size bigger than 50 participants (Covers et al., 2021; Gil-Jardiné et al., 2018; Kutz et al. 2008; Morris et al., 2023; Saltini et al., 2017; Tarquinio et al., 2016).

In most studies, the samples included both men and women, although some studies had predominantly female participants (e.g., Tarquinio et al., 2012; Tarquinio et al., 2020) and one study presents four case studies with men (Russell, 2006). Regarding the age of the participants, although all are adults, the results vary widely across different age groups, as we found participants ranging from 18 to 80 years old.

The types of trauma addressed were diverse and included medical hospitalization (Brennstuhl et al., 2022; Gil-Jardiné et al., 2018); sexual violence (Covers et al., 2021; Tarquinio et al., 2012), potentially traumatic events witnessed in the workplace such as violence (Morris et al., 2023; Tarquinio et al., 2016) or frontline professionals witnessing a massacre (Jarero et al. 2012; 2013; Tarquinio et al., 2020); terrorism and accidents (Kutz et al., 2008), war situations (Russell, 2006; Shapiro et al., 2015; Wesson et al., 2009), or natural disasters (Saltini et al., 2017).

EMDR Intervention Details

The systematic review identified several EMDR intervention modalities, a great number of interventions were adapted to recent events or specific contexts. Firstly, five studies used R-TEP, an EMDR protocol specifically designed for recent traumatic episodes (Covers et al., 2021; Gil-Jardiné et al., 2018; Morris et al., 2023; Saltini et al., 2017; Shapiro et al., 2015). In addition, two protocols focused on early interventions after critical incidents, such as EMDR-PRECI and EMDR-PROPARGA, are also used in two studies (Jarero et al., 2012 and Jarero et al., 2013, respectively). The review also shows the existence of two studies that apply URG-EMDR (Urgent EMDR) and two others that apply EMDR-RE (Recent Events), both protocols used in hospital and work settings for rapid post-event interventions. Finally, two studies apply an abbreviated standard EMDR protocol administered in a single session or two sessions (Brennstuhl et al., 2022; Kutz et al., 2008; Russell 2006).

In terms of delivery methods, most interventions were conducted individually and in person, although one study reports applications in a group format (Morris et al., 2023) or online (Tarquinio et al., 2020). The duration of the interventions ranged from a single session to a maximum of five sessions. The total participation time per study ranged from 1 week to 12 weeks, and the duration of the sessions was highly variable, from 30 minutes to 180 minutes, depending on the protocol applied and the nature of the traumatic event.

Outcomes Assessed and Results

The studies mainly evaluated symptoms of PTSD and psychological distress using standardized instruments such as the PCL-5, PCL-C, CAPS-5, SPRINT, and IES-R for PTSD; HADS for anxiety and depression, and SUDS to measure subjective distress. Only one study measured dissociation using the DTS.

The specific results of each intervention can be seen in Table 2. Firstly, as shown in Table 2, a total of 11 studies evaluated changes in PTSD symptoms following EMDR interventions. In most cases,

Figure 1
Flowchart of the Systematic Review Process

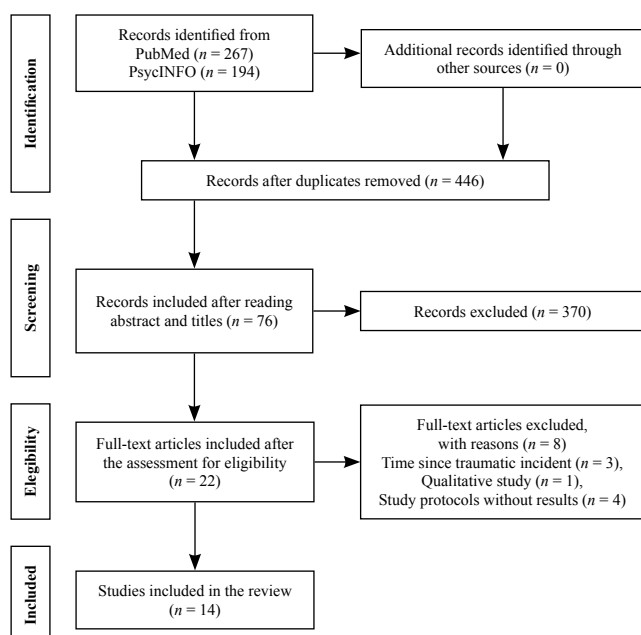


Table 1
Details of Included Studies in the Systematic Review

Authors (year), Country	Study Design		Sample characteristics				Outcomes			Intervention details				
	Type (arms)	Groups	N	Gender Man (%)	Age Mean (SD) [Range]	Type of trauma	PTSD	Distress	Disso- ciation	Name of intervention	Delivery format	Length in weeks	N° of sessions	Duration of sessions in mins
Brennstuhl et al. (2022), France	Pre-Post-FU (1)	-	21	10 (47.6)	45.1 (11.1)	COVID-19 Hospitalization	-	HADS ^a HADS ^d SUDS	-	Abbreviated EMDR	Individual, in person	1-2	4	60
Covers et al. (2021), Netherlands	RCT (2)	R-TEP TAU	57	1 (1.75)	25.81 (8.18)	Rape	CAPS-5 PCL-5	HADS ^a HADS ^d	DTS	R-TEP	Individual, in person	12	2	105
Gil-Jardiné et al. (2018), France	RCT (3)	Reassurance R-TEP TAU	130	14 (10.77)	(-)	Medical trauma	PCL-C	-	-	R-TEP	Individual, in person	1	1	60
Jarero et al. (2012), Mexico	Pre-Post-FU (2)	ITG DTG	32	16 (50.0)	-	Forensic work (massacre)	SPRINT	IES	-	EMDR-PRECI	Individual, in person	1	1	90-120
Jarero et al. (2013), Mexico	RCT (2)	EMDR-PROPARG SCG	39	20 (51.28)	[18-60]	First responders (massacre)	SPRINT	-	-	EMDR-PROPARG	Individual, in person	-	2	90
Kutz et al. (2008), Israel	Pre-Post-FU (1)	-	86	38 (44.19)	[18-81]	Terrorism/accident	-	SUDS	-	Single-Session EMDR	Individual, in person	1	1	30-60
Morris et al. (2023), Australia	Retrospective pre-post (2)	R-TEP G-TEP	80	21 (26.25)	-	Interpersonal workplace violence	PCL-5	SUDS	-	R-TEP G-TEP	Individual/group, in person/online	-	Up to 5 1	60-90 90-120
Russell (2006), USA	Case study, Pre-Post (-)	-	4	4 (100)	25.5 (4.51)	War	IES	BDI SUDS	-	Abbreviated EMDR	Individual, in person	1	1	-
Saltini et al. (2017), Italy	Retrospective review (2)	ET LT	529	96 (18.2)	46.4 (12.9)	Natural disaster	IES-R	-	-	R-TEP	Individual, in person	1	2-4	-
Shapiro et al. (2015), Israel	Pre-Post-FU (2)	ITG DTG	17	1 (5.88)	42.9 (10.5) 37.1 (14.7)	War	IES-R	PHQ-9	-	R-TEP	Individual, in person	1	2-4	90
Tarquinio et al. (2012), France	Pre-Post-FU (1)	-	17	0 (0)	32.2 (9.1)	Rape	IES	SUDS	-	URG-EMDR	Individual, in person	1	1	60-180 in most cases
Tarquinio et al. (2016), France	RCT (3)	EMDR-RE CISD DTG	60	12 (63.2) 14 (60.9) 10 (55.6)	35.3(6.7) 34.7(5.5) 33.4(5.6)	Work Violence	PCLS	SUDS	-	EMDR-RE	Individual, in person	1	1	90-120
Tarquinio et al. (2020), France	Pre-Post-FU (1)	-	17	0 (0)	33.2 (4.1)	Nurses working on COVID-19	-	HADS ^a HADS ^d SUDS	-	URG-EMDR	Individual, online	1	1	60-180 in most cases
Wesson et al. (2009), UK	Case study, Pre-Post-FU (-)	-	1	1(100)	27 (0)	War	PCL-C IES-R	HADS ^a HADS ^d BDI SUDS	-	EMDR-RE	Individual, in person	1	3	-

Note: N = sample size; SD = Standard Deviation; PTSD = Post Traumatic Stress Disorder; RCT = Randomized Controlled Trial; BDI = Beck Depression Inventory; CAPS-5 = Clinician-Administered PTSD Scale for DSM-5; CISD = Critical Incident Stress Debriefing; DTG = Delayed Treatment Group; DTS = Dissociation Tension Scale; EMDR-PRECI = Eye Movement Desensitization and Reprocessing – Protocol for Recent Critical Incidents; EMDR-PROPARG = Eye Movement Desensitization and Reprocessing – Protocol for Paraprofessional Use in Acute Trauma Situations; EMDR R-TEP = Eye Movement Desensitization and Reprocessing – Recent Traumatic Episode Protocol; EMDR-RE = Eye Movement Desensitization and Reprocessing – Recent Events protocol; ET = Early Treatment; FU = Follow-Up; HADS = Hospital Anxiety and Depression Scale; HADS^a / HADS^d = Anxiety / Depression subscales of the Hospital Anxiety and Depression Scale; IES = Impact of Events Scale; IES-R = Impact of Event Scale – Revised; ITG = Immediate Treatment Group; LT = Late Treatment; MAC-RF = Multidimensional Assessment of COVID-19-Related Fears; N = Sample Size; PCL-5 = PTSD Checklist for DSM-5; PCL-C = PTSD Checklist for DSM-IV-TR – Civilian Version; PCLS = PTSD Checklist – Stressor-Specific Version; PHQ-9 = Patient Health Questionnaire – 9; SCG = Supportive counseling group; SD = Standard Deviation; SPRINT = Short PTSD Rating Interview; SUDS = Subjective Units of Disturbance Scale; TAU = Treatment As Usual; URG-EMDR = Eye Movement Desensitization and Reprocessing – Urgent Protocol.

Table 2*Results of Included Studies in the Systematic Review*

Author (year)	PTSD	Distress	Dissociation
Brennstuhl et al. (2022)	-	HADSa: * ↓ POST + FU, IG > control, HADSd: * ↓ POST + FU, IG > control SUDS: * ↓ POST + FU, IG > control	-
Covers et al. (2021)	CAPS-5: * ↓ POST + FU, IG = control PCL-5: * ↓ POST + FU, IG = control	HADSa: * ↓ POST + FU, IG > control (only POST), HADSd: * ↓ POST + FU, IG = control	DTS: * ↓ POST + FU, IG > control
Gil-Jardiné et al. (2018)	PCL-C: ↓ POST, IG > control	-	-
Jarero et al. (2012)	SPRINT: * ↓ POST + FU, IG > control	IES: * ↓ POST + FU, IG > control	-
Jarero et al. (2013)	SPRINT: * ↓ POST + FU, IG > control	-	-
Kutz et al. (2008)	-	SUDS: * ↓ POST + FU (FU only terrorism), IG > control	-
Morris et al. (2023)	PCL-5: * ↓ POST, IG > control	SUDS: * ↓ POST, IG > control	-
Russell (2006)	IES ↓ at POST	BDI ↓ at POST SUDS ↓ at POST	-
Saltini et al. (2017)	IES-R ↓ at POST IG = control	-	-
Shapiro et al. (2015)	IES-R * ↓ at POST IES-R = at FU IG > control	PHQ-9 * ↓ at POST PHQ-9 * ↓ at FU IG = control	-
Tarquinio et al. (2012)	IES * ↓ at POST IES * ↓ at FU	SUDS * ↓ at POST SUDS * ↓ at FU	-
Tarquinio et al. (2016)	PCLS * ↓ at POST PCLS * ↓ at FU IG > control	SUDS * ↓ at POST SUDS * ↓ at FU IG > control	-
Tarquinio et al. (2020)	-	HADSa * ↓ at POST HADSd * ↓ at POST SUDS * ↓ at POST HADSa * ↓ at FU HADSd * ↓ at FU SUDS * ↓ at FU	-
Wesson et al. (2009)	PCL-C ↓ at POST IES-R ↓ at POST PCL-C ↓ at FU IES-R ↓ at FU	HADSa ↓ at POST HADSd ↓ at POST BDI ↓ at POST SUDS ↓ at POST HADSa ↓ at FU HADSd ↓ at FU BDI = at FU SUDS ↓ at FU	-

Note: * = significant ($p < .05$); ↓ = reduction of symptoms; at POST = difference from pre to post evaluation; at FU = difference from post to follow-up evaluation; BDI = Beck Depression Inventory; CAPS-5 = Clinician-Administered PTSD Scale for DSM-5; DTS = Dissociation Tension Scale; EMDR = Eye Movement Desensitization and Reprocessing; FU = Follow-Up; HADS = Hospital Anxiety and Depression Scale; HADSa = HADS – Anxiety subscale; HADSd = HADS – Depression subscale; IES = Impact of Events Scale; IES-R = Impact of Events Scale – Revised; IG = Intervention Group; MAC-RF = Multidimensional Assessment of COVID-19-Related Fears; PCL-5 = PTSD Checklist for DSM-5; PCL-C = PTSD Checklist for DSM-IV-TR – Civilian Version; PCLS = PTSD Checklist – Stressor-Specific Version; PHQ-9 = Patient Health Questionnaire – 9; R-TEP = Recent Traumatic Episode Protocol; SPRINT = Short PTSD Rating Interview; SUDS = Subjective Units of Disturbance Scale

significant reductions in PTSD symptoms were observed after the intervention, while only four of them were compared to a control group. In addition, some studies found reductions in PTSD symptoms after the intervention, although the changes were not significant (Gil-Jardiné et al., 2018; Russell, 2006; Saltini et al., 2017; Wesson et al., 2009).

Secondly, 10 studies evaluated indicators of distress (usually with HADS, BDI, PHQ-9, or SUDS). In general, a significant

decrease in emotional distress was observed after the intervention in most studies, except in Russell, 2006, and Wesson et al. (2009). The most consistent reductions in HADS (anxiety and depression) were observed in Brennstuhl et al. (2022), Covers et al. (2021), and Tarquinio et al. (2020), both post and at follow-up. Using the PHQ-9, Shapiro et al. (2015) also showed significant reductions at follow-up (FU), while in Kutz et al. (2008), reductions were only maintained at FU in the group affected by terrorism.

Finally, only one study included a dissociation measure (DTS) and found a significant reduction post-intervention and follow-up, with the EMDR group outperforming the control group (Covers et al., 2021).

Risk of Bias Assessment

The included studies varied in terms of risk of bias (Table 3). While two studies achieved high quality, fulfilling five out of six criteria and therefore presenting a low overall risk of bias (e.i., Covers et al., 2021; Gil-Jardiné et al., 2018), the majority showed notable methodological limitations. Nine studies met two or fewer criteria and were therefore rated as low quality with a high overall risk of bias, while only three studies fulfilled three criteria, indicating moderate quality with some concerns. However, these results should be interpreted within the context of the current state of research on EMDR for acute stress. A substantial proportion of the included studies were not randomised controlled trials but rather case studies or preliminary protocols. Moreover, the very nature of these interventions, often delivered in situ during or immediately after emergencies and crises, makes implementing strict methodological criteria—such as randomization, blinding, or formal power analyses—challenging. In such settings, the priority is to provide timely psychological support, which inherently limits the feasibility of more rigid experimental designs. Therefore, the lower scores on certain methodological domains do not necessarily reflect poor quality but rather the exploratory and pragmatic character of this field, which is still in an early stage of development and lacks a sufficient number of large-scale randomised controlled trials. The observed risk of bias should thus be understood as a reflection of the emerging and context-dependent evidence base, rather than a definitive limitation of the intervention itself.

Table 3
Additional Information on Quality Assessment by Study

Authors (year)	1	2	3	4	5	6	Overall
Brennstuhl et al. (2022)	0	5	1	0	0	0	1.5
Covers et al. (2021)	1	1	1	1	1	5	5.5
Gil-Jardiné et al. (2018)	1	1	1	1	5	1	5.5
Jarero et al. (2012)	0	0	1	1	5	0	2.5
Jarero et al. (2013)	5	1	1	1	0	0	3.5
Kutz et al. (2008)	0	0	0	0	0	5	0.5
Morris et al. (2023)	0	0	0	5	5	0	1
Russell (2006)	0	5	0	0	0	0	0.5
Saltini et al. (2017)	0	5	0	0	0	5	1
Shapiro et al. (2015)	5	5	0	1	5	0	2.5
Tarquinio et al. (2012)	0	1	1	0	0	0	2
Tarquinio et al. (2016)	1	5	1	5	5	5	4
Tarquinio et al. (2020)	0	5	1	1	5	0	3
Wesson et al. (2009)	0	1	1	0	0	0	2

Note: Criteria for risk of bias assessment (first row): 1 = Randomization process; 2 = Deviations from intended interventions; 3 = Missing outcome data; 4 = Measurement of the outcome; 5 = Selection of the reported results; 6 = Adequate sample size (power analysis conducted and/or $N \geq 50$); Scoring: 1 = Low risk of bias (criterion fulfilled); 0 = High risk of bias (criterion not fulfilled); x = 0.5 = Some concerns (unclear or partially fulfilled). Overall = Number of fulfilled criteria (range: 0–6). Quality rating: high (5–6), moderate (3–4), low (0–2).

Discussion

The present systematic review aimed to evaluate the efficacy and applicability of early interventions based on EMDR for the treatment of acute stress following recent traumatic events. The findings from this review are encouraging, showing reductions in PTSD symptoms, general psychological distress, and to a lesser extent, dissociative symptoms. These results partially corroborate findings from recent meta-analytic evidence (Torres-Giménez et al., 2024), which reported small but consistent effects of early EMDR interventions on PTSD symptoms, showing greater symptom reduction compared to psychological first aid and psychological debriefing. These findings highlight the need for the field to move toward greater methodological standardization and rigor in early EMDR research. In this sense, Torres-Giménez et al. (2024) stress the importance of establishing consistent intervention protocols, clearly defining the populations that are most likely to benefit from early EMDR, and specifying core clinical outcomes that allow meaningful comparison across studies. Such standardization efforts would not only improve the comparability and cumulative value of future trials but also support the development of tailored early EMDR interventions that address diverse trauma contexts more effectively.

Considering the studies reviewed in this work, it is noteworthy that EMDR interventions adapted to acute trauma contexts appear to offer significant benefits in reducing PTSD and general psychological distress symptoms, consistent with previous research (Shapiro & Laub, 2015; Tarquinio et al., 2016). However, the studies included showed considerable heterogeneity regarding design, participant characteristics, types of trauma addressed, specific protocols applied, the number and duration of sessions, and measures used to evaluate outcomes, making definitive generalizations about the universal effectiveness of these interventions challenging.

Although the reviewed studies consistently showed reductions in symptomatology, there is a notable scarcity of studies specifically evaluating dissociative symptoms, despite their clinical relevance in acute post-traumatic phases (Covers et al., 2021). Dissociative symptoms, such as depersonalization and derealization, have been increasingly recognized for their significant clinical implications. The dissociative subtype of PTSD, characterized by these symptoms, has been associated with higher PTSD symptom severity, difficulties in emotional regulation, greater functional impairment, and worse treatment outcomes compared to non-dissociative PTSD (Deen et al., 2022; Guzman Torres et al., 2023). Given this clinical significance, future research should systematically evaluate dissociative symptoms to better understand their role in ASD and potential impacts on early treatment outcomes.

From a methodological standpoint, many studies presented significant limitations, such as small sample sizes, absence of randomization or of appropriate control groups, and short follow-up periods, affecting the overall quality of available evidence. Nevertheless, these limitations should be understood in the specific application context of early EMDR interventions, often conducted in critical situations, emergencies, or post-disaster contexts, where rigorous methodological designs are typically challenging to implement (Kutz et al., 2008; Tarquinio et al., 2020). Although methodologically limited, these studies demonstrate ecological validity since they are carried out in real contexts and in extreme situations.

While some guidelines recognize the potential efficacy of early EMDR, granting it a conditional recommendation (Phelps et al., 2022), others still exclude it due to limited evidence quality, emphasizing only trauma-focused cognitive-behavioral treatments (VA/DoD, 2023). Our results suggest that, although additional evidence is still needed, the early application of adapted EMDR protocols might offer a valid and potentially beneficial clinical alternative for managing acute stress, justifying its conditional inclusion in future guideline revisions.

Finally, it is crucial to underline the urgent need for more robust research, including randomized controlled trials with larger samples, diverse trauma types, and longer follow-up periods to definitively validate the effectiveness and safety of EMDR protocols in acute contexts. These studies will also allow the identification of the most effective protocol variants and exploration of key moderating factors such as the nature of the traumatic event, initial symptom severity, and presence of dissociation.

In terms of limitations and strengths, while significant heterogeneity in methodologies, limited sample sizes, and short follow-up periods restrict the generalizability and durability of findings, the present review provides a comprehensive synthesis of recent evidence, identifies critical research gaps, integrates international guidelines, and emphasizes the potential clinical utility of early EMDR interventions despite methodological challenges.

In conclusion, although the results of this systematic review provide initial positive evidence regarding the efficacy of EMDR in treating ASD, caution is warranted due to methodological variability and identified limitations. Continued rigorous research will be crucial in consolidating this therapeutic tool as an effective early intervention in clinical and community settings following traumatic events.

Conflict of Interest

The authors have no conflict of interest.

Acknowledgements

We like to acknowledge the funding from the Spanish Ministry of Science, Innovation, and Universities, within the framework of the R&D&I Project PID2020-115003RB-I00.

References

- American Psychiatric Association. (2017). *Clinical practice guideline for the treatment of posttraumatic stress disorder*. APA Publishing.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™* (5th ed.). American Psychiatric Publishing. <https://doi.org/10.1176/appi.books.9780890425596>
- Bisson, J. I., Berliner, L., Cloitre, M., Forbes, D., Jensen, T. K., Lewis, C., Monson, C. M., Olf, 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>
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59(1), 20–28. <https://doi.org/10.1037/0003-066X.59.1.20>
- Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual Review of Clinical Psychology*, 7, 511–535. <https://doi.org/10.1146/annurev-clinpsy-032210-104526>
- Brennstuhl, M.-J., Tarquinio, P., Rydberg, J. A., Tarquinio, C. L., Peter, L., Rotonda, C., & Tarquinio, C. (2022). Treating COVID-19 patients with EMDR: A pilot study. *European Journal of Trauma & Dissociation*, 6(3), Article 100276. <https://doi.org/10.1016/j.ejtd.2022.100276>
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68(5), 748–766. <https://doi.org/10.1037/0022-006X.68.5.748>
- Bryant, R. A. (2011). Acute stress disorder as a predictor of posttraumatic stress disorder: A systematic review. *Journal of Clinical Psychiatry*, 72(2), 233–239. <https://doi.org/10.4088/JCP.09r05072blu>
- Covers, M. L. V., de Jongh, A., Huntjens, R. J. C., de Roos, C., van den Hout, M., & Bicanic, I. A. E. (2021). Early intervention with eye movement desensitization and reprocessing (EMDR) therapy to reduce the severity of post-traumatic stress symptoms in recent rape victims: A randomized controlled trial. *European Journal of Psychotraumatology*, 12(1), 1943188. <https://doi.org/10.1080/20008198.2021.1943188>
- Deen, A., Biedermann, S. V., Lotzin, A., Krüger-Gottschalk, A., Dyer, A., Knaevelsrud, C., ... & Schäfer, I. (2022). The dissociative subtype of PTSD in trauma-exposed individuals: A latent class analysis and examination of clinical covariates. *European Journal of Psychotraumatology*, 13(1). <https://doi.org/10.1080/20008198.2022.2031591>
- Gil-Jardiné, C., Evrard, G., Al Joboory, S., Tortes Saint Jammes, J., Masson, F., Ribéreau Gayon, R., Galinski, M., Salmi, L. R., Revel, P., Régis, C. A., Valdenaire, G., & Lagarde, E. (2018). Emergency room intervention to prevent post concussion like symptoms and post traumatic stress disorder: A pilot randomized controlled study. *Journal of Psychiatric Research*, 103, 229–236. <https://doi.org/10.1016/j.jpsychires.2018.05.024>
- Guzman Torres, E., Krause-Utz, A., & Sack, M. (2023). Predictors of complex PTSD: The role of trauma characteristics, dissociation, and comorbid psychopathology. *Borderline Personality Disorder and Emotion Dysregulation*, 10(1). <https://doi.org/10.1186/s40479-022-00208-7>
- Jarero, I., Artigas, L., & Lauber, M. (2011). The EMDR protocol for recent critical incidents: Application in a disaster mental health continuum of care context. *Journal of EMDR Practice and Research*, 5(3), 82–94. <https://doi.org/10.1891/1933-3196.5.3.82>
- Jarero, I., Uribe, S., Artigas, L., & Givaudan, M. (2015). EMDR protocol for recent critical incidents: A randomized controlled trial in a technological disaster context. *Journal of EMDR Practice and Research*, 9(4), 166–173. <https://doi.org/10.1891/1933-3196.9.4.166>
- Jarero, I., Artigas, L., & Uribe, S. (2013). EMDR individual protocol for paraprofessional use: A randomized controlled trial with first responders. *Journal of EMDR Practice and Research*, 7(2), 55–64. <https://doi.org/10.1891/1933-3196.7.2.55>
- Jarero, I., & Uribe, S. (2012). The EMDR protocol for recent critical incidents: Follow-up report of an application in a human massacre situation. *Journal of EMDR Practice and Research*, 6(2), 50–61. <https://doi.org/10.1891/1933-3196.6.2.50>
- Jarero, I., & Artigas, L. (2016). The EMDR Protocol for Recent Critical Incidents (EMDR-PRECI): Application in a technological disaster. *Journal of EMDR Practice and Research*, 10(4), 199–207. <https://doi.org/10.1891/1933-3196.9.2.98>
- Kutz, I., Resnik, V., & Dekel, R. (2008). The effect of single-session modified EMDR on acute stress syndromes. *Journal of EMDR Practice and Research*, 2(3), 190–200. <https://doi.org/10.1891/1933-3196.2.3.190>

- McGaugh, J. L. (2004). The amygdala modulates the consolidation of memories of emotionally arousing experiences. *Annual Review of Neuroscience*, 27, 1–28. <https://doi.org/10.1146/annurev.neuro.27.070203.144157>
- McGuire, A. P., Gauthier, J. M., Anderson, L. M., Hollingsworth, D. W., Tracy, M., Galea, S., & Coffey, S. F. (2014). Social support moderates effects of natural disaster exposure on depression and posttraumatic stress disorder symptoms. *Journal of Traumatic Stress*, 27(2), 205–211. <https://doi.org/10.1002/jts.21900>
- Management of Posttraumatic Stress Disorder and Acute Stress Disorder Work Group. (2023). VA/DoD clinical practice guideline for the management of posttraumatic stress disorder and acute stress disorder: Version 4.0. U.S. Department of Veterans Affairs & Department of Defense. <https://www.healthquality.va.gov/guidelines/MH/ptsd/>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>
- Morris, H., Hatzikiriakidis, K., Dwyer, J., Lewis, C., Halfpenny, N., Miller, R., & Skouteris, H. (2023). Early intervention for residential out-of-home care staff using eye movement desensitization and reprocessing (EMDR). *Psychological Trauma: Theory, Research, Practice, and Policy*, 15(Suppl. 2), S456–S464. <https://doi.org/10.1037/tra0001418>
- National Center for PTSD. (2023). *Acute Stress Disorder (ASD) Factsheet*. U.S. Department of Veterans Affairs. <https://www.ptsd.va.gov/index.asp>
- National Institute for Health and Care Excellence. (2018). Post traumatic stress disorder (NICE guideline No. NG116). <https://www.nice.org.uk/guidance/ng116>
- Phelps, A. J., Lethbridge, R., Brennan, S., Bryant, R. A., Burns, P., Cooper, J. A., ... & 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>
- Russell, M. C. (2006). Treating combat-related stress disorders: A multiple case study utilizing Eye Movement Desensitization and Reprocessing (EMDR) with battlefield casualties from the Iraqi War. *Military Psychology*, 18(1), 1–18. https://doi.org/10.1207/s15327876mp1801_1
- Saltini, A., Rebecchi, D., Callera, C., Fernandez, I., Bergonzini, E., & Starace, F. (2017). Early Eye Movement Desensitization and Reprocessing (EMDR) intervention in a disaster mental health care context. *Psychology, Health & Medicine*, 23(3), 285–294. <https://doi.org/10.1080/13548506.2017.1344255>
- Schauer, M., Neuner, F., & Elbert, T. (2011). *Narrative Exposure Therapy: A short-term intervention for traumatic stress disorders* (2nd ed.). Hogrefe Publishing.
- Shapiro, E., & Laub, B. (2008). Early EMDR intervention (EEI): A summary, a theoretical model, and the recent traumatic episode protocol (R-TEP). *Journal of EMDR Practice and Research*, 2(2), 79–96. <https://doi.org/10.1891/1933-3196.2.2.79>
- Shapiro, E., & Laub, B. (2015). Early EMDR intervention (EEI) following trauma. *Journal of EMDR Practice and Research*, 9(1), 17–28. <https://doi.org/10.1891/1933-3196.9.1.17>
- Sterne, J. A. C., Savović, J., & Page, M. J. (2019). “RoB 2: A Revised Tool for Assessing Risk of Bias in Randomised Trials.” *BMJ (Clinical Research Ed.)* 366: 14898. <https://doi.org/10.1136/bmj.14898>
- Tarquinio, C., Brennstuhl, M. J., Reichenbach, S., Rydberg, J. A., & Tarquinio, P. (2012). Early psychological intervention for rape victims: A pilot study of the EMDR Recent Event Protocol. *European Review of Applied Psychology*, 62(4), 219–226. <https://doi.org/10.1016/j.erap.2012.05.001>
- Tarquinio, C., Brennstuhl, M.-J., Rydberg, J. A., Bassan, F., Peter, L., Tarquinio, C. L., Auxéméry, Y., Rotonda, C., & Tarquinio, P. (2020). EMDR in telemental health counseling for healthcare workers caring for COVID-19 patients: A pilot study. *Issues in Mental Health Nursing*, 42(1), 3–10. <https://doi.org/10.1080/01612840.2020.1818014>
- Tarquinio, C., Rotonda, C., Houllé, W. A., Montel, S., Rydberg, J. A., Minary, L., Dellucci, H., Tarquinio, P., Fayard, A., & Alla, F. (2016). Early psychological preventive intervention for workplace violence: A randomized controlled explorative and comparative study between EMDR recent event and critical incident stress debriefing. *Issues in Mental Health Nursing*, 37(11), 787–799. <https://doi.org/10.1080/01612840.2016.1224282>
- Torres-Giménez, Anna, et al. (2024). Efficacy of EMDR for early intervention after a traumatic event: A systematic review and meta-analysis. *Journal of Psychiatric Research* 174, 73–83. <https://doi.org/10.1016/j.jpsychires.2024.04.019>
- U.S. Department of Veterans Affairs/Department of Defense. (2023). VA/DoD clinical practice guidelines: Management of posttraumatic stress disorder and acute stress disorder 2023. <https://www.healthquality.va.gov/guidelines/MH/ptsd/>
- Wesson, M., & Gould, M. (2009). Intervening early with EMDR on military operations: A case study. *Journal of EMDR Practice and Research*, 3(2), 91–97. <https://doi.org/10.1891/1933-3196.3.2.91>
- World Health Organization. (2013). *Guidelines for the management of conditions specifically related to stress*. <https://apps>