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Research Article

The Effectiveness of Narrative Exposure Therapy and Meta-Emotional Psychotherapy on Symptom Severity in Individuals with Complex Post-Traumatic Stress Disorder

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ABSTRACT

Introduction: Complex post-traumatic stress disorder (CPTSD) is characterized by core PTSD symptoms alongside disturbances in self-organization (DSO), arising from prolonged or repeated trauma. Narrative exposure therapy (NET) targets traumatic memory integration through chronological narration, while meta-emotional psychotherapy (MEP) focuses on regulating secondary (meta-)emotional processes to improve emotional awareness and self-organization**.**

Objectives: This randomized clinical trial aimed to compare the efficacy of NET and MEP on symptom severity in individuals with CPTSD.

Methods: Using a pretest–posttest and three-month follow-up design, 45 participants in Ahvaz, Iran (2025) were recruited via convenience sampling and randomly assigned to NET (n = 15), MEP (n = 15), or a wait-list control group (n = 15). Both intervention groups received 14 weekly 90-minute sessions delivered by a trained psychotherapist following structured protocols. Data were analyzed using repeated-measures ANOVA with Bonferroni post hoc tests in SPSS (version 26). Symptom severity was assessed with the International Trauma Questionnaire (ITQ).

Results: Repeated measures ANOVA revealed significant group × time interactions for all symptom domains (all $p < 0.001$, with large effect sizes, partial η^2 ranging from 0.47 to 0.79). Both NET and MEP significantly reduced overall symptom severity compared to the control group ($p < 0.001$). No significant differences were found between NET and MEP in total CPTSD symptom severity ($p > 0.05$). NET showed greater reductions in re-experiencing symptoms, whereas MEP demonstrated superior effects on affective dysregulation and DSO.

Conclusions: Both NET and MEP effectively reduced CPTSD symptoms, with differential strengths aligning with their theoretical mechanisms. However, given the small sample size and convenience sampling, findings should be interpreted cautiously and require replication in larger, rigorously controlled trials.

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1. Introduction

Complex post-traumatic stress disorder (CPTSD) is a severe and debilitating condition typically resulting from prolonged, repeated, or multiple traumatic events from which escape was difficult or impossible, such as childhood abuse or domestic violence (1). Prevalence rates of CPTSD vary across populations; studies indicate that approximately 1%-8% of the general population and up to 20-30% of individuals exposed to prolonged interpersonal trauma meet criteria for CPTSD, with higher rates observed in clinical samples (references updated/added as needed) (2). Beyond the core symptoms of traditional PTSD, individuals with CPTSD suffer from pervasive disturbances in self-organization (DSO), including profound difficulties in emotion regulation, persistent beliefs about being diminished or worthless, and chronic interpersonal struggles (3).

These individuals often experience a fragmented sense of identity and heightened sensitivity to environmental triggers, which significantly impairs their social and occupational functioning. The complexity of their clinical presentation necessitates a deeper understanding of how multifaceted interventions can address both traumatic memories and the systemic emotional dysregulation that characterizes this population (4).

Symptom severity serves as a key indicator of the overall clinical burden in CPTSD, encompassing the PTSD symptom clusters (re-experiencing, avoidance, and sense of threat) as well as DSO domains (5). High symptom severity is associated with substantial functional impairment and elevated risk of comorbid conditions such as depression and anxiety (6-8).

Narrative Exposure Therapy (NET) is a well-established, trauma-focused intervention that facilitates the integration of fragmented traumatic memories into a coherent autobiographical narrative through the construction of a chronological "lifeline" (9). At the same time, NET has demonstrated efficacy in reducing PTSD symptoms, particularly re-experiencing, in populations exposed to multiple traumas (10-12), its specific benefits for the broader DSO symptoms in CPTSD warrant further examination.

In contrast, meta-emotional psychotherapy (MEP) targets reflexive emotional processes—how individuals relate to their own emotions—by enhancing meta-emotional awareness and restructuring maladaptive secondary emotions such as shame and guilt (13). Although emerging evidence supports the potential of meta-emotional approaches for improving emotional regulation and self-organization in trauma-related conditions (14-16), MEP remains less established than NET, and its comparative utility in CPTSD requires empirical validation.

The diagnostic distinction between PTSD and CPTSD in the ICD-11 underscores the need for interventions that address both memory-based and self-organization deficits. Despite the established role of NET in processing traumatic memories and the promising focus of MEP on emotional regulation, direct head-to-head comparisons of these two approaches on CPTSD symptom severity are scarce. This gap is particularly important because CPTSD requires treatments that target both core PTSD symptoms and DSO features simultaneously.

NET was selected as the comparison condition because of its strong evidence base for multiple and complex trauma (9, 10). MEP was included due to its theoretical alignment with DSO symptoms and preliminary support for enhancing emotional awareness and self-compassion in trauma-affected populations (14, 15).

The necessity of this research arises from the diagnostic distinction between PTSD and CPTSD in the ICD-11, which calls for specialized treatment protocols that address both memory-based and regulatory deficits.

2. Objectives

Consequently, this study aimed to compare the efficacy of NET and MEP on symptom severity in individuals with CPTSD.

3. Methods

3.1 Study Design

This study employed a randomized controlled trial with a pretest–posttest and three-month follow-up design. The trial included three parallel groups: NET, MEP, and a wait-list control group. The study was prospectively registered in the Iranian Registry of Clinical Trials (IRCT; registration number: IRCT20250123064492N1).

3.2 Participants

The statistical population comprised all individuals diagnosed with CPTSD who referred to a clinical psychology center in Ahvaz, Iran, during 2025. A sample of 45 participants was selected through convenience sampling. Participants were recruited via referrals from local mental health clinics and community announcements. Potential participants underwent initial screening with the International Trauma Questionnaire (ITQ), supplemented by clinical judgment from a licensed psychologist to confirm CPTSD diagnosis according to ICD-11 criteria.

Participants were randomly assigned (using a computer-generated random number sequence with simple randomization) to three equal groups: NET (n = 15), MEP (n = 15), or wait-list control (n = 15). Allocation concealment was maintained using sequentially numbered, opaque sealed envelopes. Inclusion criteria: (a) definitive diagnosis of CPTSD based on the ITQ, (b) age 18 years or older, (c) at least a high school diploma, and (d) no concurrent psychological interventions. Exclusion criteria: (a) comorbid psychotic disorders, (b) active substance abuse, or (c) missing more than two intervention sessions.

No participant attrition occurred during the intervention or follow-up phases. A CONSORT flow diagram detailing participant recruitment, screening, enrollment, and follow-up is provided in Figure 1. The sample size (n = 15 per group) was determined based on a priori power analysis using G*Power software (version 3.1), assuming a power of 0.80, α = 0.05, and an expected large effect size (f = 0.40) for repeated measures analysis of variance (ANOVA).

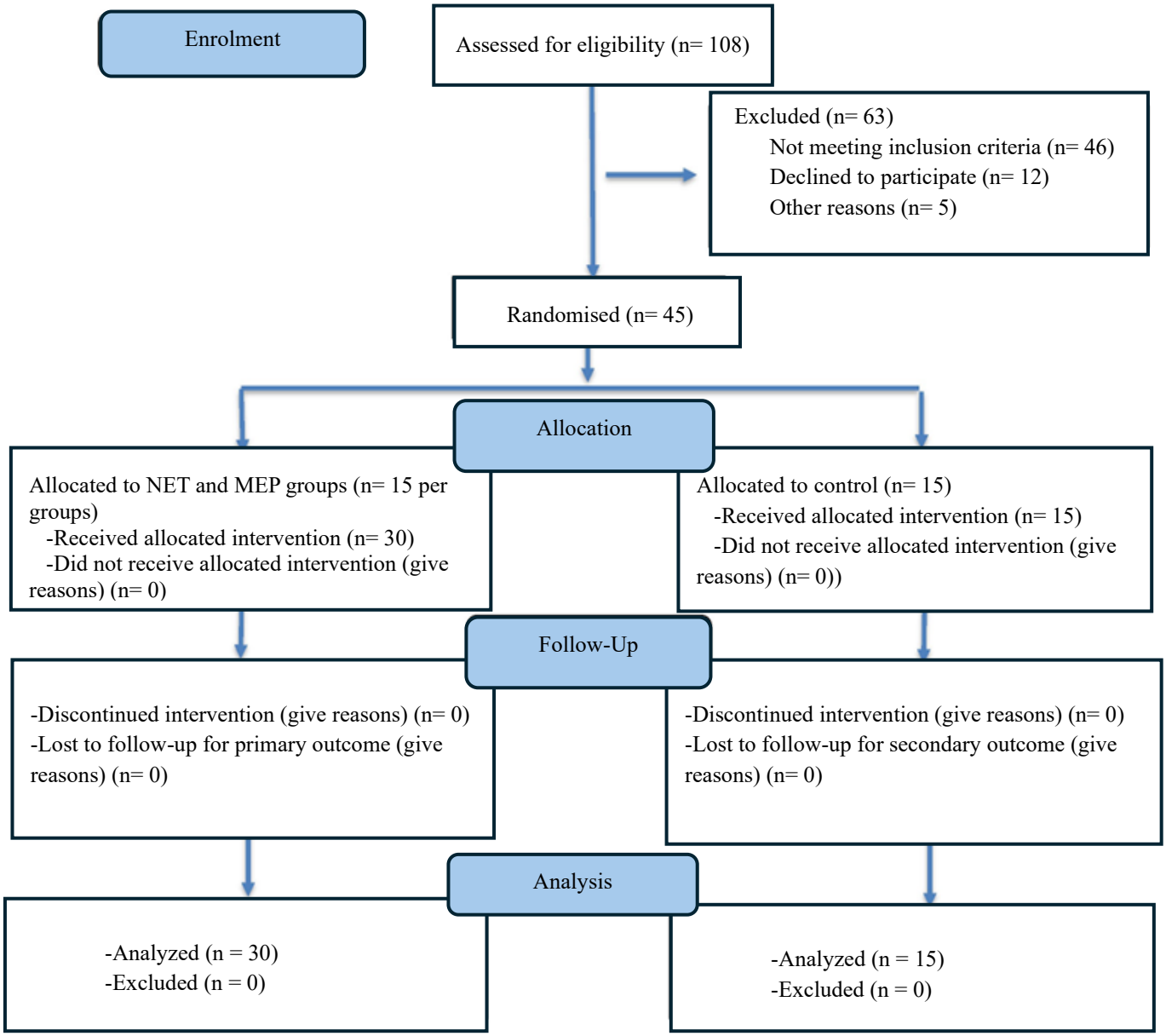

Figure 1: CONSORT flow diagram

3.3 Scales

3.3.1 International Trauma Questionnaire (ITQ): The ITQ is a 22-item self-report instrument specifically designed to assess the ICD-11 diagnostic criteria for PTSD and CPTSD. It consists of two major subscales: the PTSD scale (re-experiencing, avoidance, and sense of threat) and the DSO scale. Each item is scored on a 5-point Likert scale (0–4), with higher scores indicating greater symptom severity (18). In the present study, the Cronbach's alpha for the total scale was 0.89, and for the subscales it ranged from 0.81 to 0.87, demonstrating excellent internal consistency. Previous Persian validations have reported similar reliability, with alpha coefficients exceeding 0.84 (19). Content validity ratio (CVR) was confirmed by three expert psychologists (CVR = 0.87).

3.4 Data Collection

The study was executed in three distinct phases: baseline (pretest), intervention, and three-month follow-up. Both NET and MEP interventions were delivered by the same licensed clinical psychologist with specialized training and certification in trauma-focused therapies and over 10 years of experience in trauma-informed care, at a clinical psychology center in Ahvaz, Iran.

To minimize therapist bias and ensure treatment fidelity, all sessions were manualized, audio-recorded, and a random 20% of sessions were reviewed by an independent supervisor experienced in both protocols. Adherence to protocols exceeded 90%.

Narrative Exposure Therapy (NET): Followed the standard manual by Schauer et al. (17) and focused on chronological life narrative construction (Lifeline) and detailed exposure to traumatic memories. MEP: Based on meta-emotion and metacognitive frameworks (13), emphasizing identification, awareness, and restructuring of secondary emotional responses (e.g., shame and guilt about primary emotions), along with building self-compassion and emotional regulation skills. Both interventions consisted of 14 weekly sessions, each lasting approximately 90 minutes. Table 1 presents the comprehensive breakdown and objectives of each session for both intervention groups.

Table 1 : Demographic characteristics of the participants by group

Session	Narrative Exposure Therapy (NET)	Meta-Emotional Psychotherapy (MEP)
1	Psychoeducation on trauma and explaining the "Lifeline" logic.	Introduction to meta-emotions and identifying primary emotional responses.
2	Constructing the Lifeline by identifying traumatic (stones) and positive (flowers) events.	Exploring secondary emotional reactions (feelings about feelings) and awareness.
3	Finishing the Lifeline and transitioning to the first chronological traumatic narrative.	Identifying maladaptive meta-emotional patterns and their roots in past trauma.
4	Deep exposure and habituation to the first major traumatic memory (hot memory).	Cognitive restructuring of secondary emotions such as chronic shame and guilt.
5	Processing fragmented traumatic memories and sensory details of the second event.	Developing internal monitoring for emotional triggers and regulation strategies.
6	Continued narrative exposure and integration of subsequent traumatic events.	Enhancing self-compassion to counteract negative self-concept and self-blame.
7	Linking traumatic memories to the broader life context and biographical history.	Analyzing the impact of meta-emotional styles on interpersonal relationships.
8	In-depth processing of the most distressing traumatic experiences.	Strengthening emotional resilience and stabilization techniques through mindfulness.
9	Organizing the chronological narrative and addressing ongoing triggers.	Practicing meta-emotional regulation in the context of daily stressful scenarios.
10	Integrating positive life events (flowers) into the narrative for balance.	Reviewing emotional processing progress and identifying psychological barriers.
11	Finalizing the written biography and identifying future goals and values.	Focusing on long-term emotional self-regulation, autonomy, and self-efficacy.
12	Reading the complete final biography and reflecting on the life journey.	Consolidation of therapeutic gains and developing a relapse prevention plan.
13	Ritualistic closure of the narrative and symbolic testimony of the biography.	Advanced practice of meta-emotional awareness in complex social interactions.
14	Final reflection on the therapeutic process and formal termination.	Final evaluation of emotional growth, closure, and termination of treatment.

3.5 Data Analysis

Data were analyzed using descriptive statistics (means and standard deviations) and inferential statistics. Specifically, repeated measures ANOVA was utilized to compare mean scores across three time points (pretest, posttest, and follow-up) and between the three groups. Assumptions were thoroughly examined: Shapiro-Wilk test for normality, Mauchly's test of sphericity (with Greenhouse-Geisser correction where violated), and Levene's test for homogeneity of variances. Post-hoc comparisons were conducted using the Bonferroni test in SPSS version 26. Effect sizes (partial η^2) are reported for all significant effects. No missing data were present.

3.6 Ethical consideration

Ethical considerations were strictly upheld. All participants provided informed written consent, were assured of data confidentiality, and were informed of their right to withdraw at any stage without any consequences. The study was approved by the Ethics Committee of Islamic Azad University, Ahvaz Branch (ethical code: IR.IAU.AHVAZ.REC.1403.381). The control group was promised and subsequently provided with an abbreviated intervention after the study's conclusion.

4. Results

All 45 participants completed the intervention and the three-month follow-up assessments, with no attrition observed. Demographic characteristics of the participants across the three groups were largely comparable at baseline. These characteristics are presented in Table 2.

Table 2: Demographic characteristics of the participants by group

Variable	NET (n=15)	MEP (n=15)	Control (n=15)	Test Statistic
Gender, n (%)				
Female	13 (86.7%)	13 (86.7%)	12 (80.0%)	$\chi^2 = 0.60$, p = .74
Male	2 (13.3%)	2 (13.3%)	3 (20.0%)	
Age (M ± SD)	31.06 ± 5.81	29.46 ± 5.59	31.13 ± 6.32	F = 0.32, p = .73
Education, n (%)				
High School	5 (33.3%)	6 (40.0%)	5 (33.3%)	$\chi^2 = 0.32$, p = .85
University	10 (66.7%)	9 (60.0%)	10 (66.7%)	
Marital Status, n (%)				
Single	6 (40.0%)	7 (46.7%)	5 (33.3%)	$\chi^2 = 0.82$, p = .66
Married	9 (60.0%)	8 (53.3%)	10 (66.7%)	

NET = Narrative Exposure Therapy; MEP = Meta-Emotional Psychotherapy; n = number of participants; M = Mean; SD = Standard Deviation.

Descriptive statistics for symptom scores across time points and groups are presented in Table 3. Both intervention groups showed reductions in mean scores from pretest to posttest and follow-up across all domains, while the wait-list control group exhibited minimal change.

Prior to analysis, statistical assumptions were examined and largely met. Shapiro-Wilk tests indicated normality for most variables ($p > 0.05$). Levene's test confirmed homogeneity of variances ($p > 0.05$).

Repeated measures ANOVA revealed significant main effects of time, group, and group × time interactions for all outcome variables (all $p < 0.001$, except the group main effect for avoidance, $p = 0.003$). Effect sizes were large for most effects .Although these effect sizes are notably large, they are consistent with the intensive nature of the 14-session interventions in a sample of individuals with clinically significant CPTSD. However, given the small sample size, these findings should be interpreted with caution and replicated in larger studies.

Post-hoc Bonferroni tests confirmed significant within-group improvements from pretest to posttest and pretest to follow-up for both NET and MEP groups across all variables ($p < 0.001$ for most comparisons), with gains maintained at follow-up. No significant changes occurred in the control group ($p > 0.05$) (Table 3).

Between-group analyses showed no significant differences at pretest (P>0.05). At posttest and follow-up, both intervention groups differed significantly from the control group on all variables (P<0.001). Direct comparisons between NET and MEP indicated significant differences favoring NET for re-experiencing symptoms and favoring MEP for disturbances in self-organization (P<0.001), with no significant differences in avoidance, sense of threat, or total CPTSD symptom severity (all P>0.05) (Table 4).

Table 3: Means and standard deviations of symptom scores across time points and groups

Variable	Stage	NET	MEP	Control	Time	NET		MEP		Control	
		Mean ± SD	Mean ± SD	Mean ± SD		Mean Difference	P	Mean Difference	P	Mean Difference	P
Re-experiencing	Pretest	5.80 ± 1.37	5.73 ± 1.22	5.66 ± 0.89	Posttest and Pretest	-3.67	0.001	-2.33	0.001	0.07	0.612
	Posttest	2.13 ± 0.83	3.40 ± 0.82	5.73 ± 1.43	Follow-up and Pretest	-4.20	0.001	-2.60	0.001	0.14	0.478
	Follow-up	1.60 ± 0.82	3.13 ± 1.18	5.80 ± 1.37	Follow-up and Posttest	-0.53	0.821	-0.27	0.345	0.07	0.567
Avoidance	Pretest	5.86 ± 1.67	5.60 ± 1.63	5.53 ± 1.45	Posttest and Pretest	-2.40	0.001	-2.74	0.001	-0.27	.892
	Posttest	3.46 ± 1.18	2.86 ± 1.18	5.26 ± 1.43	Follow-up and Pretest	-2.46	0.001	-2.67	0.001	-0.13	0.231
	Follow-up	3.40 ± 1.12	2.93 ± 1.03	5.40 ± 1.45	Follow-up and Posttest	-0.06	0.456	0.07	0.789	0.14	0.612
Sense of threat	Pretest	5.87 ± 0.99	5.66 ± 1.24	5.76 ± 0.99	Posttest and Pretest	-2.34	0.001	-3.02	0.001	-0.16	0.478
	Posttest	3.53 ± 0.91	2.64 ± 1.17	5.60 ± 1.35	Follow-up and Pretest	-2.27	0.001	-2.60	0.001	-0.34	0.821
	Follow-up	3.60 ± 1.24	3.06 ± 1.16	5.42 ± 1.24	Follow-up and Posttest	0.07	0.567	0.42	0.345	-0.18	0.892
Disturbances in self-organization	Pretest	43.86 ± 3.54	43.33 ±3.22	44.26 ± 3.15	Posttest and Pretest	-8.60	0.001	-11.33	0.001	0.40	0.231
	Posttest	35.26 ± 3.93	32.00 ± 3.64	44.66 ± 2.82	Follow-up and Pretest	-8.00	0.001	-13.13	0.001	0.34	0.456
	Follow-up	35.86 ± 3.85	30.20 ± 2.07	44.60 ± 2.41	Follow-up and Posttest	0.60	0.789	-1.80	0.123	-0.06	0.567
Symptom severity (total)	Pretest	61.40 ±5.38	60.26 ± 5.90	61.33 ± 4.56	Posttest and Pretest	-17.00	0.001	-19.33	0.001	-0.07	0.612
	Posttest	44.40 ± 3.88	40.93 ± 4.35	61.26 ± 4.94	Follow-up and Pretest	-16.94	0.001	-20.93	0.001	-0.04	0.478
	Follow-up	44.46 ± 4.73	39.33 ± 3.33	61.29 ± 4.44	Follow-up and Posttest	0.06	0.821	-1.60	0.345	0.03	0.892

NET: Narrative Exposure Therapy; MEP: Meta-Emotional Psychotherapy

5. Discussion

The present study was designed to compare the efficacy of NET and MEP on symptom severity in individuals with CPTSD. Both interventions led to significant reductions in overall CPTSD symptoms compared to the wait-list control group. These improvements were evident immediately after treatment and were largely maintained at the three-month follow-up. The findings provide empirical support for both approaches while highlighting their differential strengths in addressing specific symptom clusters of CPTSD.

NET demonstrated superior effects on re-experiencing symptoms. This result aligns well with the theoretical foundation of NET, which emphasizes the chronological integration of traumatic memories through detailed exposure and narrative construction (9, 10, 20). By helping participants organize fragmented memories into a coherent life story, NET appears to directly reduce intrusive recollections and flashbacks (10-12). This finding is consistent with previous research showing NET's effectiveness in populations exposed to multiple or prolonged traumas. In contrast, MEP showed stronger effects on DSO, particularly affective dysregulation and negative self-concept. MEP's focus on meta-emotional processes — that is, how individuals relate to their own emotions — seems especially beneficial for addressing shame, guilt, and difficulties in emotion regulation (13, 14, 23). These secondary emotional reactions often perpetuate the broader self-organization deficits seen in CPTSD (15, 16, 25). The results suggest that enhancing meta-emotional awareness and fostering self-compassion can produce meaningful changes in this domain.

Table 4: Post-hoc comparisons (Bonferroni) for between-group differences at each time point

Variable	Groups	Pretest		Posttest		Follow-up	
		Mean Difference	P	Mean Difference	P	Mean Difference	P
Re-experiencing	NET and MEP	0.07	0.612	-1.27	0.008	-1.53	0.001
	NET and Control	0.14	0.478	-3.60	0.001	-4.20	0.001
	MEP and Control	0.07	0.821	-2.33	0.001	-2.67	0.001
Avoidance	NET and MEP	0.26	0.345	0.60	0.231	0.47	0.567
	NET and Control	0.33	0.892	-1.80	0.001	-2.00	0.001
	MEP and Control	0.07	0.612	-2.40	0.001	-2.47	0.001
Sense of threat	NET and MEP	0.21	0.478	0.89	0.123	0.54	0.345
	NET and Control	0.11	0.821	-2.07	0.001	-1.82	0.001
	MEP and Control	-0.10	0.567	-2.96	0.001	-2.36	0.001
Disturbances in self-organization	NET and MEP	0.53	0.231	3.26	0.001	5.66	0.001
	NET and Control	-0.40	0.456	-9.40	0.001	-8.74	0.001
	MEP and Control	-0.93	0.789	-12.66	0.001	-14.40	0.001
Symptom severity (total)	NET and MEP	1.14	0.345	3.47	0.089	5.13	0.056
	NET and Control	0.07	0.612	-16.86	0.001	-16.83	0.001
	MEP and Control	-1.07	0.478	-20.33	0.001	-21.96	0.001

NET: Narrative Exposure Therapy; MEP: Meta-Emotional Psychotherapy

Importantly, no significant differences emerged between NET and MEP in total CPTSD symptom severity, avoidance, or sense of threat. This indicates that both treatments are broadly effective, though they may work through different pathways (3, 4). The large effect sizes observed across most outcomes (partial η^2 ranging from 0.47 to 0.79) are noteworthy. While such magnitudes are promising and consistent with the intensive 14-session format delivered by an experienced therapist, they should be interpreted cautiously. Small sample sizes can sometimes inflate effect sizes, and replication in larger studies is necessary to confirm the robustness of these findings.

From a clinical perspective, these differential effects have practical implications. Clinicians may consider baseline symptom profiles when choosing between the two approaches. Individuals with prominent re-experiencing and intrusive memories might benefit more from NET's structured narrative work. On the other hand, those with severe emotional dysregulation and negative self-beliefs may gain greater advantage from MEP's focus on meta-emotional regulation. Such a personalized, symptom-guided approach could improve treatment outcomes and efficiency in real-world settings.

The maintenance of therapeutic gains at the three-month follow-up is encouraging. However, longer-term follow-up assessments are needed to determine the durability of these improvements. Nonspecific factors such as therapeutic alliance, structured session

time, and regular contact with a trained clinician likely contributed to the observed benefits in both groups. Future studies should include active control conditions to better isolate the specific effects of each intervention.

In summary, this study demonstrates that both NET and MEP are promising interventions for CPTSD. Their differential strengths suggest that integrating or sequencing these approaches based on individual symptom presentations could be a valuable direction for future treatment development. Nevertheless, the preliminary nature of these findings underscores the need for larger, multicenter, and more rigorously controlled trials before widespread clinical recommendations can be made. Such research will help refine personalized treatment strategies and ultimately improve care for individuals living with complex trauma-related disorders.

5.1 Limitation

Several limitations should be considered when interpreting these results. The relatively small sample size and use of convenience sampling limit statistical power and generalizability. The absence of assessor blinding and reliance on a single therapist introduce potential biases. Additionally, the three-month follow-up period, while informative, is relatively short for assessing long-term outcomes. The single-site nature of the study in Ahvaz, Iran, further constrains external validity. Future research should employ larger, multicenter samples, active control conditions, and extended follow-up assessments to strengthen confidence in the findings.

5.2 Conclusion

In conclusion, both NET and MEP were effective in reducing CPTSD symptom severity compared to a wait-list control. The results further suggest differential strengths consistent with their respective theoretical mechanisms. These preliminary findings support the potential value of considering symptom profiles when selecting between these approaches in clinical practice. However, given the small sample size, convenience sampling, single therapist, and relatively short follow-up, the results should be interpreted with caution. Replication in larger, methodologically more rigorous trials is essential before firm recommendations can be made.

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Statements

AI Use: The authors used Grammarly solely for language editing and improving readability. All scientific content, data analysis, interpretation of results, and final decisions were made by the authors. The AI tool was not used for data generation, literature synthesis, or creating original scientific ideas.

Authors' Contribution: Conceptualization, methodology, investigation, writing – original draft, data curation: SK; Conceptualization, supervision, project administration, writing – review and editing, funding acquisition: SS; Methodology, formal analysis, visualization: AF; Investigation, resources, validation: FH. All authors read and approved the final manuscript.

Conflict of Interests: The authors declared no conflicts of interest.

Data Availability: The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Ethical Approval: This study was approved by the Ethics Committee of Islamic Azad University, Ahvaz Branch, Iran (Ethical Code: IR.IAU.AHVAZ.REC.14 03.381).

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Informed Consent: Informed written consent was obtained from all individual participants included in the study.

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