CASE REPORT

Targeting Complex PTSD in Treatment-Resistant Depression: A Case Report on Memory Reconsolidation Based Therapy

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ABSTRACT

Background: Treatment-resistant depression (TRD) comorbid with complex post-traumatic stress disorder (cPTSD) presents significant therapeutic challenges due to resistance to standard pharmacotherapy and neuromodulation. This case report evaluates the efficacy of Memory Reconsolidation-based Trauma Therapy in resolving intense affective dysregulation and trauma symptoms in a patient unresponsive to multimodal interventions. **Case:** A 32-year-old patient presented with TRD and cPTSD characterized by severe anger, self-harm, and career stagnation stemming from cumulative relational traumas. Despite aggressive polypharmacy and adjunctive repetitive Transcranial Magnetic Stimulation (rTMS) yielding only partial improvement, six sessions of Trauma Processing Therapy (TPT) were initiated. The intervention targeted specific traumatic memories, including bullying, sibling rivalry, and professional harassment. TPT uses the ego-state concept to facilitate memory reconsolidation. Post-treatment, the patient achieved full remission, shown by cessation of self-harm, medication tapering, and substantial psychometric improvements (PCL-5: 71 to 5; PHQ-9: 16 to 2; GAD-7: 13 to 0). **Discussion:** While rTMS enhances neuroplasticity via long-term potentiation-like mechanisms, it often not specific enough to overwrite specific maladaptive emotional learnings. TPT leverages the brain's innate reconsolidation window to render traumatic memories labile and update them with contradictory adaptive information. This mechanism facilitates the physiological "unlearning" of trauma responses that maintain cPTSD-driven TRD, offering a depth of resolution superior to symptom management strategies. **Conclusion:** TPT successfully resolved refractory symptoms where conventional treatments failed, highlighting Memory Reconsolidation as a critical mechanism for treating cPTSD-comorbid TRD. This suggests a need for targeted trauma-focused interventions to achieve functional recovery in complex affective disorders.

Keywords: Treatment-Resistant Depression, Complex PTSD, Memory Reconsolidation, Trauma Processing Therapy, Ego State Therapy

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INTRODUCTION

Treatment-resistant depression and complex post-traumatic stress disorder present significant clinical challenges due to their often intertwined symptoms and resistant to conventional pharmacotherapy and psychotherapeutic interventions[1]. This case report details the successful application of Memory Reconsolidation-based Therapy in a 32-year-old male diagnosed with both pharmacoresistant depression and cPTSD, highlighting a novel therapeutic avenue for intense affective dysregulation and trauma-related symptoms. Complex post-traumatic stress disorder, as defined by ICD-11 guidelines, is characterized by persistent, pervasive difficulties in affective regulation, self-perception, and relational functioning, often stemming from prolonged or repeated exposure to highly threatening or horrific events[2]. Such complex presentations frequently necessitate an integrated therapeutic approach, particularly when patients exhibit pharmacoresistance to standard antidepressant regimens and incomplete responses to traditional trauma-focused psychotherapies[1,3].

Memory reconsolidation, a process by which reactivated memories become labile and open to modification, offers a promising mechanism for the “unlearning” or nullification of emotional and behavioral responses driven by maladaptive learned expectations and mental models[4]. This therapeutic framework posits that targeting the underlying implicit emotional learnings can lead to a depotentiation of traumatic memories and a reduction in associated dysfunctional behaviors[4,5]. This approach facilitates the erasure of symptom-generating emotional learnings, thereby producing transformative change in patients[6]. Here, we present the case of a 32-year-old patient with a prolonged history of severe depression and complex trauma symptoms, illustrating the profound clinical utility of Memory Reconsolidation-based Therapy, in this case TPT, in achieving remission where conventional treatments less helpful. This case underscores the potential of targeted memory reconsolidation interventions to resolve deeply entrenched psychopathology, offering a paradigm shift from symptom management to the fundamental eradication of maladaptive emotional learning[7].

Trauma Processing Therapy is an integrative therapeutic modality rooted in memory reconsolidation principles, amalgamating hypnoanalysis with ego state therapy and Internal Family Systems (IFS). This framework delineates intrapsychic roles into four distinct categories: the 'Person' (the authentic, compassionate self seeking healing), the 'Pain' (the carrier of traumatic content), the 'Protector' (internal defense), and the 'Persona' (external adaptation). Fundamentally, TPT operates on the premise that all parts function with the benevolent intent of safeguarding the 'Pain.' The protocol adheres to a four-phase memory reconsolidation structure: choosing traumatic memories, willingness to process, processing memories, and uninterrupted cycle. Its clinical application has been documented in published case studies regarding Prolonged Grief Disorder and sexual abuse. Unlike conventional ego state techniques, TPT does not involve extensive communication[7].

Specifically, this therapy leverages the brain's innate capacity for memory plasticity to disrupt and reformulate the neural pathways encoding traumatic experiences, moving beyond mere symptom reduction to address the root cognitive and emotional underpinnings of distress[7]. This approach holds particular promise for individuals with a history of recurrent depression rooted in adverse childhood experiences or relational trauma, where conventional cognitive behavioral therapy alone may prove insufficient[8]. By directly addressing the emotional essence of traumatic memories, memory reconsolidation therapy provides a unique opportunity to diminish their influence on an individual's current experience, moving beyond mere symptom alleviation[9]. This

allows for a fundamental shift in emotional responses and behavioral patterns previously governed by these entrenched traumatic memories[10,11]. The therapeutic mechanism involves reactivating these memories to render them labile, followed by the introduction of new, contradictory information that effectively overwrites the maladaptive emotional learning[7,10]. This leads to a permanent elimination of the behavioral, physiological, and subjective expressions of the original emotional response without the need for ongoing suppression or management strategies[7]. TPT is a memory reconsolidation-based therapeutic framework that can be integrated with various approaches, including psychoanalytic, cognitive, and ego state-based modalities, among others[7,9]. In this case report, the application of TPT specifically utilizing the ego state approach will be presented.

CASE

A 32-year-old male patient, work as general practitioner and seeking specialty training (*Program Pendidikan Dokter Spesialis* [PPDS]) presented with a chief complaint of difficulty managing emotions while working as a clinic physician. Anamnesis revealed a history of treatment for recurrent depression dating back to medical school. Mental Status Examination (MSE) showed an appearance consistent with stated age, compos mentis/unaltered sensorium, dysphoric/irritable mood and affect. Thought process showed preoccupation with uncontrollable emotions and financial issues. No perceptual disturbances were found at present. Insight: Grade III. At the initial consultation, the patient was diagnosed with Recurrent Depressive Disorder, Current Episode Severe. Subsequent history-taking revealed that the patient first sought psychiatric treatment following a failure to enter the prestigious medical school in 2012. The patient sought help from 10 different psychiatrists along his mental health journey. He experienced multiple depressive episodes triggered by workplace bullying during his clinical clerkship in 2018, treatment was continued by his psychiatric tutor at his college and had ever prescribed Vortioxetine at that time.

Within these past 2 years, the patient resumed psychiatric care due to worsening emotional dysregulation. Stressed by financial difficulties at home, the patient engaged in non-suicidal self-injury (NSSI) by repeatedly hitting himself. Prior to this visit, the patient had been prescribed Fluoxetine and Clobazam by a previous psychiatrist, but failed to show an adequate clinical response.

During the first visit with the current therapist, the patient was prescribed Fluoxetine 20 mg and Olanzapine 5 mg. At the one-week follow-up, due to insufficient response, the regimen was adjusted by adding Sertraline 50 mg and titrating Olanzapine to 10 mg. One month later, the patient reported persistent emotional volatility, insomnia, work-related distress regarding their clinical workload, and ongoing self-harming behaviour. Consequently, Amitriptyline 25 mg was added. At the subsequent monthly follow-up, the Amitriptyline dose was increased to 50 mg to address persistent insomnia. In the following month, although the patient reported improved sleep latency, sleep quality remained poor, and clinical symptoms showed no significant improvement. Diazepam 5 mg was then added to facilitate relaxation and sleep. Although these dosages were not yet at the maximum recommended levels, further dose escalation was attempted but subsequently limited by the emergence of distressing side effects that significantly impaired the patient's quality of life. Consequently, the patient was classified as having TRD due to the failure of multiple pharmacological classes and the inability to tolerate higher therapeutic doses.

Following four months of inadequate response despite multiple antidepressants and antipsychotic augmentation, a diagnosis of TRD was established. The patient was

referred for rTMS for five cycles. After three months of rTMS therapy, the patient reported a 50% reduction in anxiety, depression, and anger. However, symptoms relapsed when the patient encountered environmental triggers that reactivated traumas related to past academic failure and repeated bullying throughout his life. Consequently, the diagnosis was revised to TRD comorbid with cPTSD, characterized by severe affective dysregulation manifesting as intense anger and irritability toward peers and patients, self-harm behaviors (e.g., striking his own body), insomnia, financial stressors secondary to parental debt, and career stagnation.[8] His trauma history encompassed relational adversities, including high school bullying, perceived sibling rivalry wherein his sister was favored as the "special child," and professional harassment by a some seniors during medical training[2,8]

Table 1. Clinical Timelines

Time Point	Significant Clinical Events & Symptoms	Diagnostic & Interventions	Clinical Outcomes
Pre-Medical School (2012)	Depressive symptoms after failing the entrance exam for a prestigious medical school.	Diagnosed with Major Depressive Disorder (MDD) with cognitive impairment and suspected psychosis symptoms	Pharmacotherapy (Fluoxetine, Risperidone and Trihexyphenidyl) and psychiatric consultation initiated.
Clinical Clerkship/Co-ass (2018)	Recurrent depressive episodes triggered by workplace bullying during clinical rotations.	Recurrent Depressive Episode, intervention with Vortioxetine	Progressive emotional instability; completed clerkship with supervision from his tutor
Post-Graduation (2022)	Escalation of symptoms; onset of self-harming behaviour (hitting self) and dysregulate affect	Re-initiated psychiatric treatment; Pharmacotherapy resumed (Fluoxetine and Clobazam)	Transient stabilization.
Current Presentation	Severe emotional dysregulation (irritability) triggered by high patient volume and uncooperative patients at the clinic.	Mental Status Examination; Identified preoccupation with financial stress and lack of emotional control.	Insight Grade III; Preoccupation with previous failures and current stressors.
Management Plan	Difficulty managing clinical duties as a physician.	Adjustment of treatment regimen for TRD; Intensive psychotherapy focused on memory reconsolidation of multiple trauma (cPTSD) during 2012-2024	Awaiting long-term follow-up and functional recovery.

Initial pharmacotherapy in 2022 with fluoxetine and clobazam yielded no meaningful response. Escalation to polypharmacy provided minimal symptom alleviation, exemplifying treatment-resistant depression with persistent affective dysregulation despite multimodal antidepressant trials[1,12]. Adjunctive rTMS to the left dorsolateral prefrontal cortex achieved partial remission (approximately 50% reduction in depressive symptom scores), yet residual anger, irritability, self-harm, and emotional lability endured, underscoring the limitations of neuromodulation in trauma-comorbid TRD[13,14].

Repetitive Transcranial Magnetic Stimulation to the left dorsolateral prefrontal cortex, as administered adjunctively in this

case,[13,14] targets specific brain regions to induce long-term potentiation-like effects, facilitating neuroplasticity by creating a temporal window conducive to new learning. However, long-term potentiation (LTP) primarily serves as an enabler of plasticity rather than a direct mechanism for rewriting entrenched maladaptive emotional learnings; without targeted more specific interventions, enhanced plasticity alone maybe insufficient, as the therapeutic cure depends on the specific new information incorporated during this window to overwrite dysfunctional memory traces.[4,10] Critically, the brain's resting state involves ongoing spontaneous recall of memories,[13] which in cPTSD persistently reactivates traumatic traces absent external triggers, sustaining depression-like symptoms such as affective dysregulation and self-harm.[2,8] Thus, Memory Reconsolidation-based Therapy synergizes with rTMS by precisely exploiting this plasticity window to render reactivated traumatic memories labile, juxtapose contradictory adaptive information, and permanently nullify their emotional impact,[7,10] ensuring resting-state recalls no longer provoke maladaptive responses and achieving remission beyond rTMS's partial effects.

Given the interplay of implicit emotional learnings from repeated relational traumas driving symptom persistence,[4,6] a trauma-informed, memory reconsolidation-based intervention was initiated, comprising six 60-minute sessions from October to December 2025.[7,15] Each session resolved different traumatic memories.

This study received formal ethical clearance from the Institutional Review Board of RSJ Dr. Radjiman Wedyodiningrat Lawang with Certificate of Ethical Approval No. TK.02.04/D.XXXVII.3.6/6093/2025. Prior to the intervention, the patient provided written informed consent to undergo the full TPT protocol and complete all pre- and post-treatment assessments. The patient was thoroughly informed of potential risks, including transient emotional surges and somatic discomfort during the sessions. Furthermore, explicit written consent was obtained for the publication of this case report, with all clinical data fully anonymized to ensure patient confidentiality.

Session 1

In the ego state framework, each part is understood to have a specific role and function and may be associated with a particular developmental age and memory network. In this case, one ego state was identified as carrying a “failure” schema, while another ego state embodied a rigid religious role that imposed harsh self-judgment on the client. The interaction between these two ego states generated intense anger and urges for self-harm.

Through affective inquiry, the “failure” ego state was found to be linked to multiple adverse experiences, including peer victimization during high school, secondary traumatization through verbal abuse by a surgical mentor during the co-assistantship period, and academic disappointment related to university admissions.

In the first session, the client received psychoeducation regarding the ego state framework within Trauma Processing Therapy. To prevent emotional overwhelm during memory processing, the therapist did not engage in extensive verbal exploration of the traumatic events, but instead focused on a single wounded ego state embedded within the traumatic memory.

Session 2 and 3

In the second and third session, the therapist targeted the processing of a bullying-related memory from when the client was 18 years old. The patient was described as having exhibited eccentric social behavior during his school years, characterized by rigid adherence to religious practices, which contributed to social isolation and peer alienation. Furthermore, the patient reported experiencing verbal maltreatment from a teacher who disparaged his intellectual

abilities and dismissed his aspiration to pursue a medical degree in the prestigious university.

During memory processing, the therapist assisted the client in accessing the ego state that most required support and in meeting the full range of emotional needs present in that moment. These need-fulfillment interventions were delivered in a brief and focused manner, centered on the client's core emotional needs, with each intervention followed by guided breathing to facilitate emotional regulation. Throughout the process, the client addressed the unmet need for agency and the capacity to resist within the context of the bullying experience. During the session, the patient also engaged in a therapeutic dialogue with the internalized figures involved, articulating previously unresolved grievances and releasing long-standing resentment and indignation. This memory processing protocol lasted approximately 15–30 minutes per session and was continued until the associated emotional distress was no longer experienced, as measured by the Subjective Units of Distress (SUD), with a target score of 0.

Session 4

In the fourth session, memories related to jealousy toward the younger sibling were processed. The patient perceived the sibling as a "miracle child" due to a complicated prenatal history involving premature rupture of membranes at seven months' gestation, followed by a successful continuation of the pregnancy to full term at nine months. The patient reported perceived parental favoritism and recalled experiences during a depressive relapse in which the parents implicitly framed the patient's condition as a burden. These recurring experiences contributed to the development of significant sibling rivalry.

The core unmet emotional needs identified in this context included the need for fairness, love, attention, and validation. Following the processing of these memories, the client no longer experienced feelings of jealousy toward the sibling

Session 5

The fifth session addressed trauma related to verbal harassment experienced during the patient's clinical clerkship. The patient reported being subjected to derogatory remarks from several attending surgeons, who questioned the patient's intellectual competence and predicted academic failure.

The primary unmet emotional needs associated with this memory included the need for agency, the capacity to speak up, and the ability to assert boundaries toward the internalized mentor introject embedded in the traumatic memory. Utilizing guided active imagination within the TPT framework, the therapist facilitated the patient in fulfilling these retaliatory and self-protective needs. This intervention resulted in the resolution of long-standing resentment and improved regulation of previously suppressed emotional distress, thereby reducing trauma-driven dysregulation.

Session 6

In the sixth session, the patient reported somatic symptoms of nausea and vertigo that emerged whenever he attempted to touch a textbook. These symptoms were conceptualized as two distinct ego states, each with its own experiential awareness and protective function. Further exploration indicated that both states operated as Protectors, aiming to prevent the patient from re-experiencing past failures.

A salient memory emerged involving the patient's strong desire to enroll in a dream university, which he had been unable to enter at that time. This experience generated an internal conflict between a powerful motivation to pursue education at the institution and an intense fear of failing again.

The session focused on processing the memory of the university admission failure and addressing the associated unmet emotional needs, particularly fear and sadness. The need-fulfillment intervention

involved having the client's Self accompany the wounded ego state within the memory until the emotional charge was neutralized.

Following the session, the patient attempted to open a textbook and reported the absence of previous somatic sensations, including nausea and vertigo. The patient expressed significant relief and reported feeling ready to begin preparing for admission to the target university.

Post-intervention with 1 month follow up, marked clinical remission ensued: anger substantially abated, self-harm ceased, diazepam discontinued, olanzapine tapered, and the patient secured a PPDS recommendation letter, signifying vocational recovery.[15] Psychometric assessments corroborated these gains.[22]

Table 2. Pre- and Post-Treatment Psychometric Scores

Measure	Pre-TPT (September 2025)	Post TPT session 6 (January 2026)
PHQ-9	16	2
GAD-7	13	0
PCL-5	71	5

These reductions exceeded minimal clinically important differences (PHQ-9/GAD-7: ≥5 points; PCL-5: ≥10 points), affirming TPT's efficacy in resolving cPTSD-driven TRD.[23] The significant decrease in PCL-5 scores, from 71 to 5, GAD-7 from 13 to 0, and PHQ-9 from 16 to 2, highlights the profound impact of memory reconsolidation on complex trauma symptoms[15,24]. This sustained improvement, particularly in the PCL-5, suggests a fundamental shift in the patient's processing of traumatic memories, moving beyond mere symptomatic relief to a deeper, more permanent resolution of trauma-related distress[7]. This outcome aligns with evidence suggesting that memory reconsolidation techniques can lead to a fundamental loss of diagnosis for cPTSD in a significant proportion of cases[24]. Moreover, the resolution of long-standing anger and cessation of self-harm behaviors underscore the efficacy of targeting the neurobiological underpinnings of affective dysregulation through this innovative therapeutic approach. This case report underscores the critical role of memory reconsolidation in facilitating the unlearning and nullification of maladaptive emotional and behavioral responses driven by learned expectations and mental models rooted in complex trauma[4].

The observed improvements align with prior research indicating that integrative therapeutic approaches, such as TPT, which incorporate principles from mindfulness, hypnoanalysis, and ego-state therapy alongside memory reconsolidation, can effectively address deep-seated traumatic memories[7]. Such comprehensive interventions are particularly valuable for presentations of complex trauma, where traditional pharmacotherapy and less targeted psychotherapeutic modalities often prove insufficient[9,25]. This comprehensive approach allowed for the successful integration and reconsolidation of traumatic memories, leading to a profound and sustained reduction in symptoms[7,15]. The notable reduction in the PCL-5 score to 5 indicates that the patient no longer met diagnostic criteria for PTSD, reflecting a clinically significant change[26].

DISCUSSION

Treatment-resistant depression comorbid with cPTSD represents a challenging clinical presentation where standard interventions often fall short.[2,8] This case exemplifies how unaddressed relational traumas can perpetuate maladaptive emotional learnings that underpin persistent

affective dysregulation, self-harm, and vocational impairment despite aggressive pharmacotherapy and neuromodulation.[4,6] These implicit emotional learnings, formed through repeated relational adversities, generate symptoms beyond biological dysregulation, manifesting as rigid schemas of "failure" and "protector" ego states that resist symptomatic relief.[8]

Complex post-traumatic stress disorder is defined by a pervasive history of interpersonal trauma, often chronic and inescapable, leading to multifaceted impairments in affect regulation, identity, and relationships[7]. Diagnosis criteria for cPTSD often include disturbances in self-organization, encompassing persistent negative self-concept, affective dysregulation, and interpersonal difficulties[27]]. This often manifests in individuals presenting with symptoms such as severe emotional dysregulation, dissociative symptoms, and an enduring sense of shame or guilt[25]. The patient's presentation, characterized by persistent anger, self-harm, and career stagnation despite extensive prior treatments, strongly aligns with the symptomatology of cPTSD, where maladaptive predictive processing stemming from chronic trauma can perpetuate a negative self-concept and skewed social interactions[17,28].

Treatment-resistant depression is defined by inadequate response to at least two different antidepressant trials of adequate dose and duration[15]. Initial pharmacotherapy with fluoxetine, olanzapine, sertraline, amitriptyline, and diazepam targeted neurochemical imbalances but yielded only minimal gains, highlighting TRD's hallmark resistance in trauma-comorbid cases.[1,12] Adjunctive rTMS to the left dorsolateral prefrontal cortex induced partial remission, addressing fronto-central beta oscillations linked to comorbid major depressive disorder and PTSD[13,14]. In this case, multiple psychopharmacological agents failed to produce remission, while transcranial magnetic stimulation yielded only partial benefit, unequivocally confirming pharmacoresistance and neuromodulation-refractory TRD.

However, neither modality resolved the traumatic memories driving symptom persistence: bullying engendered self-denigration, sibling rivalry reinforced inferiority expectancies, and academic/professional setbacks (e.g., obsessive pursuit of elite admission amid harassment) fueled anger and career stagnation. These interventions mitigated biological symptoms like low energy and insomnia but failed to depotentiate trauma-encoded emotional expectancies, leaving residual irritability and self-harm intact[6].

Traumatic memories are maintained through neurobiological processes that strengthen synaptic connections between neurons, primarily via long-term potentiation, a fundamental mechanism of synaptic plasticity underlying learning and memory consolidation. LTP involves persistent strengthening of synapses based on recent patterns of activity, particularly in regions like the amygdala, hippocampus, and prefrontal cortex, which encode emotional significance, contextual details, and executive regulation of trauma responses, respectively[24].

Transcranial magnetic stimulation, particularly rTMS at frequencies such as 5 Hz targeting the left dorsolateral prefrontal cortex, leverages LTP-like mechanisms to enhance synaptic plasticity and learning capacity in these regions. By inducing transient depolarizations that mimic natural synaptic activity, rTMS promotes Hebbian LTP, increasing α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptor trafficking and dendritic spine growth, thereby improving prefrontal regulation of limbic hyperactivity in comorbid PTSD and major depressive disorder.[13,14] This addresses fronto-central beta oscillations associated with symptom persistence, yielding partial symptomatic relief as observed in this case.

LTP itself is a neutral biological mechanism for learning, it simply amplifies

synaptic efficacy based on coincident pre- and postsynaptic firing. The therapeutic effect in memory reconsolidation therapies like Trauma Processing Therapy hinges on the specific content juxtaposed during the post-reactivation labile window: maladaptive traumatic expectancies (e.g., "failure" schemas) are updated with contradictory adaptive information (e.g., resilience validation), which is then consolidated via LTP, depotentiating the original emotional learnings.[4,7,10]

Even at rest, the brain remains highly active in a "resting state" characterized by default mode network oscillations, facilitating spontaneous recall of autobiographical events as a form of mental time travel. This intrinsic replay consolidates experiences but also reactivates engrams without external cues.[24]This continuous reactivation can inadvertently strengthen the pathological associations encoded within traumatic memories, perpetuating the cycle of distress and avoidance characteristic of PTSD. In this context, the targeted reactivation of specific traumatic memories followed by the introduction of new, contradictory emotional information becomes crucial for therapeutic change, allowing for the active unlearning of conditioned fear responses and the updating of threat expectancies.

This process, known as memory reconsolidation, directly interferes with the neurobiological maintenance of traumatic memories by rendering them temporarily labile and susceptible to modification, thereby enabling their therapeutic updating and subsequent extinction of maladaptive responses[29]. Unlike mere extinction, which suppresses fear responses but leaves the original memory trace intact, reconsolidation-based therapies fundamentally alter the emotional valence and associative content of the traumatic memory itself[16]].

If specific traumatic memories are not resolved through targeted reconsolidation, the resting brain repeatedly activates these distressing traces, perpetuating LTP-strengthened pathways. This engenders chronic physiological arousal (e.g., sympathetic hyperactivity), intrusive rumination, and depression-mimicking symptoms like anhedonia and psychomotor retardation, resistant to pharmacotherapy or non-specific neuromodulation.[6,8,17]

Trauma Processing Therapy is an integrated psychotherapy approach that facilitates a transformative shift in how traumatic memories are stored and recalled by addressing both the implicit emotional components and explicit factual details[7]. This method diverges from traditional cognitive behavioral approaches by not merely managing symptoms but by fundamentally altering the affective charge of traumatic memories, thereby extinguishing their capacity to trigger distress[16]. Using ego state as a tool to identify and process dissociated self-states, TPT provides a structured framework for accessing and unlearning deeply embedded maladaptive emotional learnings, thereby fostering enduring psychotherapeutic change by directly targeting the memory reconsolidation process[4,8,15,17].

Ego states is conceptualized as distinct, organized patterns of experience and behavior, each with its own sense of self, that develop in response to life experiences, particularly trauma[18-20]. These states, often formed as adaptive responses to overwhelming situations, can become maladaptive if they remain dissociated and unintegrated, perpetuating symptoms of cPTSD[7]. By engaging with these ego states during the reconsolidation window, TPT facilitates the patient's capacity to alter uncomfortable emotional associations, thereby integrating and relearning thoughts, actions, and emotional responses associated with past traumas[9]. This process of "transprocessing" involves the creation of new neural networks, particularly in regions where implicit emotional and explicit cognitive information intersect, leading to a

fundamental reorganization of memory functions[21].

In Trauma Processing Therapy, a specific sequence of stages must be followed to ensure the therapy proceeds effectively. This memory processing protocols include:

1. Stabilization. The patient must be in an emotionally stable state and not overwhelmed. When emotions are too intense, the amygdala becomes hyperactive and inhibits the prefrontal cortex from performing its executive functions. A hyperactive amygdala also heightens bodily vigilance by increasing sympathetic nervous system activity through the release of norepinephrine from the locus coeruleus. Uncomfortable bodily sensations, combined with a prefrontal cortex unable to function properly, make any form of psychotherapy difficult to conduct[10]. To achieve this stabilization, psychopharmacology and supportive psychotherapy approaches may be used. Ensuring the patient is in a safe condition is the primary obligation in memory reconsolidation-based therapy[15]. Additionally, clear psychoeducation regarding the memory reconsolidation process is required so the patient understands the procedure and the potential for becoming overwhelmed during the therapy process[7]. The initial session focused on gathering a comprehensive life-history of the patient's traumatic memories and providing detailed psychoeducation. A fundamental priority in memory reconsolidation-based therapy is establishing emotional stabilization. Without adequate stabilization, patients are prone to dominant anxiety and hyperarousal, which significantly hinders their capacity to engage effectively in the TPT protocol. To address this, the patient was equipped with various grounding and stabilization techniques to ensure emotional safety before proceeding to memory processing[9].

2. Memory Activation Both the patient and the therapist must wisely select the memory to be recalled. Specific, vivid memories with strong affective charge are one of the causes of clinical symptoms in patients. These memories can be accessed through specific "entry points," such as emotions, meanings, specific events, age timelines, school timelines, specific places, specific persons, or even specific bodily sensations. When the memory is activated, it must be ensured that the patient is willing to revisit the event and reconstruct it according to their needs. When activation occurs, the patient views the event from a third-person perspective, observing the "pain" part of themselves that is still facing the stressor of that time and attempting to fulfill its needs[7]. This activation is carefully titrated to render the maladaptive affective generative model labile without overwhelming the individual[6], thereby opening the reconsolidation window for modification while ensuring sufficient salience for updating and avoiding defensive responses[30]. The "affect bridge" technique facilitates this by linking present emotions to past events, identifying related traumatic memories[7], and accessing their core emotional and interoceptive components[30].

3. Memory Processing Once the memory is reactivated, TPT identifies the specific outputs generated by the maladaptive prior, typically manifesting as Dominant Affective State (DAS): The single most dominant emotion triggered during reactivation. And Maladaptive Meaning: A higher-level abstract cognitive inference explaining the underlying affective distress. If a cognitive Meaning emerges first, therapist need to guide the client beyond the abstract narrative toward the felt sense behind it, uncovering the underlying DAS. This ensures the intervention targets the affective-interoceptive level—the primary driver of memory updating. The DAS serves as the essential ground for the intervention, preventing clients from getting lost in maladaptive behavioral impulses. Unlike Imagery Rescripting, which can lead to extreme scenarios of violence or "disappearing," TPT anchors the process in neutral, internal states—for example, refining an impulse to attack into "feeling empowered"

or to disappear into "feeling calm." From the identified DAS, the therapist infers the Unmet Affective Prediction (UAP)—the core expectation left unfulfilled during the trauma. For instance, a DAS of fear signals an UAP of protection or safety, regardless of the client's cognitive interpretations. This phase guides clients to explore these implicit "needs" violated in the traumatic event[6], revealing the foundational emotional learnings that fuel persistent symptoms. Precisely pinpointing the UAP thus enables the formulation of a tailored Corrective Affective Prediction (CAP) that directly fulfills it. To evoke the CAP, the therapist poses the "Magical Question," eliciting an interoceptive shift such as an embodied sense of safety, agency, or worth. This structured prompt generates a prediction of the emotional state that would arise if the specific need were fulfilled, creating a prediction error relative to the initial UAP. Typical formulations for example: “If need X were fulfilled, what would you feel?” or “If you were able to do X, what would you feel?”

4. Co-Activation Through co-activation, the client holds the CAP simultaneously with the reactivated traumatic memory — via accessing ego state, imagination, self-talk, or resource memories. This juxtaposition of incompatible states generates a powerful yet tolerable affective prediction error within the reconsolidation window[31]. Neurocomputationally, it leverages memory lability to integrate corrective interoceptive signals, thereby revising the generative model: it reduces free energy tied to threat priors and transforms the intrusive, reliving memory into a distant, episodic one[31]. Within each cycle of memory processing and coactivation, the client concludes the cycle by engaging in slow, deep breathing to re-stabilize their emotional state following affective processing. The processes of memory processing and coactivation are conducted iteratively until the traumatic memory diminishes in its vividness and loses its associated distressing affect (with SUD reaching 0).

From sessions 2 through 6, the intervention targeted a deeply entrenched traumatic memory that had left the patient with a pervasive sense of helplessness. In the TPT framework, each traumatic memory is characterized by a DAS which is linked to an UAP. The UAP represents the core emotional needs that were left unfulfilled at the time of the trauma. The therapeutic protocol followed a structured sequence of reactivation, memory processing, and co-activation. Through this process, the therapist facilitated the emergence of a CAP, which provides an embodied experience of the fulfilled need. By simultaneously holding the traumatic memory and the CAP within the reconsolidation window, a profound affective prediction error was generated, effectively neutralizing the traumatic memory and permanently reducing the associated emotional distress[7,9].

Trauma Processing Therapy, leveraging memory reconsolidation, offered a paradigm shift by reactivating and juxtaposing traumatic memories with adaptive information, enabling erasure of maladaptive learnings.[7,10] This process disrupts consolidated fear structures, nullifying sympathetic arousal and behavioral responses without reliance on extinction or habituation.[24] In this patient, TPT across six sessions weekly targeted bullying, sibling rivalry, harassment, and past failures, yielding profound gains: PCL-5 scores progressing from 71 to 5 (exceeding minimal clinically important difference), PHQ-9 from 16 to 2, and GAD-7 from 13 to 0.[22,23] No longer meeting PTSD criteria, the patient achieved functional recovery—anger abated, self-harm ceased, diazepam discontinued, olanzapine tapered, and a subspecialty training recommendation secured—underscoring MR's capacity for transformational change.[15,26]

These outcomes align with evidence that MR-based therapies outperform exposure in cPTSD, fostering sustained unlearning of trauma-driven responses where pharmacotherapy and TMS prove

insufficient.[9,25] Limitations include the single-case design, potential expectancy effects, and need for randomized trials. Nonetheless, TPT emerges as a promising, brief intervention for cPTSD-driven TRD, warranting broader validation.[7]

CONCLUSION

This case illustrates the transformative potential of Trauma Processing Therapy, which harnesses memory reconsolidation, in a patient with treatment-resistant depression comorbid with complex post-traumatic stress disorder stemming from relational traumas including bullying, sibling rivalry, and professional harassment[4,8]. Despite aggressive pharmacotherapy (fluoxetine, olanzapine, sertraline, amitriptyline, diazepam) and adjunctive rTMS yielding only partial remission, five sessions of TPT targeting core traumatic memories resulted in profound symptom resolution: PCL-5 scores dropped from 71 to 5 (no longer meeting PTSD criteria[26]), PHQ-9 from 16 to 2, and GAD-7 from 13 to 0, alongside cessation of self-harm, anger resolution, diazepam discontinuation, olanzapine taper, and restored vocational functioning[7,15,24]. These outcomes underscore the necessity for clinicians to routinely screen TRD patients for cPTSD, as unaddressed relational traumas perpetuate maladaptive emotional learnings resistant to standard interventions[2,6]. In conclusion, MR-based therapies like TPT represent a promising adjunctive approach, enabling reduction in polypharmacy and restoration of psychosocial functioning in complex trauma-driven TRD[9,25].

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