Proceedings of ICBioMed 2025 Symposium: AI for Healthcare: Advanced Medical Data Analytics and Smart Rehabilitation
DOI: 10.54254/2753-8818/2025.AU25519

Cognitive Restructuring in Psychological Rehabilitation Therapy for Dissociative Identity Disorder Patients

Yueyao Sun

CDUTCM-Keele, Chengdu University of TCM, Chengdu, China
sun.yueyao@stu.cdutcm.edu.cn

Abstract: Dissociative Identity Disorder (DID) have fragmented identities, memory impairments, and emotional resistance, which seriously affect their physical and mental health. This article explores cognitive restructuring as a key method for psychological rehabilitation. The research results of this article show that recombination is the core treatment method for DID, targeting the cognitive processes of maintaining dispersed identity and emotional disorders. By challenging maladaptive thinking patterns through techniques such as dialogue questioning and visual rewriting, this approach promotes functional integration of identity states, disrupts memory separation, and supports neural reconstruction involved in emotion regulation. Neurobiological studies have shown that this intervention can enhance the activity of brain regions crucial for real-world testing and emotional management, while clinical studies have shown a significant reduction in dissociative symptoms. However, several limitations must be acknowledged in order to optimize its application. The average reduction in separation symptoms was 38%, and patients' memory continuity of different identities also improved. Neuroimaging shows that the connectivity of memory related brain regions has increased by 25%. In addition, 70% of patients reported a decrease in emotional resistance and actively engaged in the treatment process. These findings highlight the effectiveness of cognitive restructuring in promoting identity integration and emotional regulation, providing a promising direction for DID rehabilitation. However, limitations such as emotional distress that may arise during the treatment process also need to be noted.

Keywords: Dissociative Identity Disorder (DID), Cognitive Restructuring, Psychological Rehabilitation.

1. Introduction

Dissociative Identity Disorder (DID), a profound dissociative disorder, is defined by the presence of two or more distinct identity states that alternately govern an individuals behavior, accompanied by diverse psychobiological symptoms [1]. While clinically treatable, its effective management faces significant hurdles: historical debates (e.g. early skepticism over its authenticity), persistent misconceptions (e.g. conflating DID with malingering), and inadequate clinical training, all of which obstruct the spread of accurate treatment knowledge to both practitioners and patients.

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DOI: 10.54254/2753-8818/2025.AU25519

Current rehabilitation efforts confront two critical challenges. First, dissociative memory dysfunction disrupts trauma processing and skill generalization. Dissociative amnesia, the core barrier, creates memory gaps that impede retention of therapeutic strategies, prolonging recovery. Neuropsychological research reveals that dissociation fragments traumatic memories, impairing emotional learning crucial for trauma resolution [1]. State-dependent amnesia exacerbates this situation. Skills learned in one identity are often not transferable to other identities, resulting in functional discontinuity. Brain imaging studies have further shown changes in activation of memory-related regions across identities, highlighting the neurobiological basis for this split.

Second, emotional resistance arises from comorbid mood disorders (e.g. major depression, generalized anxiety). These conditions foster ambivalence toward recovery, as patients may view healing as threatening the protective functions of alternate identities. For example, depression reduces motivation for therapeutic tasks, while anxiety amplifies avoidance of integration. This resistance forms a self - self-perpetuating cycle: avoidance reinforces dissociative defenses, deepening identity fragmentation [2]. Cognitive restructuring stands as a cornerstone in addressing these challenges, offering a targeted approach to dismantle the cognitive and emotional barriers inherent in DID. At its core, this therapeutic strategy aims to identify and reframe the dissociative cognitive biases that sustain fragmented identities. For instance, a “child” identity might perceive the world as inherently dangerous, while a “protector” identity clings to hyper-vigilance as a survival mechanism. By guiding patients to recognize these distorted thought patterns across identities, cognitive restructuring fosters a unified narrative of self, enabling coherent decision-making and emotional regulation.

Neuroscientifically, this process interacts with neuroplasticity: consistent cognitive restructuring can modulate activity in the prefrontal cortex and limbic system—regions critical for integrating memory, emotion, and self-awareness. This neural reconfiguration helps bridge dissociative memory gaps, allowing trauma memories to be processed holistically rather than being compartmentalized by identity states. Moreover, by challenging the belief that recovery threatens the “safety” of alternate identities, it directly combats emotional resistance. Patients gradually shift from viewing therapy as a threat to embracing it as a collaborative journey, weakening the cycle of avoidance and dissociation.

In clinical practice, cognitive restructuring also enhances the efficacy of other interventions. When paired with trauma-focused therapies, it provides a cognitive “foundation” for patients to confront painful memories without becoming overwhelmed by dissociative defenses. For DID patients, whose recovery hinges on integrating fragmented selves, this approach is not merely beneficial—it is essential. By aligning cognitive, emotional, and neural processes toward wholeness, cognitive restructuring paves the way for meaningful, sustainable healing in a disorder defined by fragmentation.

Despite these challenges, research on DID rehabilitation has advanced in theoretical frameworks and clinical practices. Neuroimaging techniques, for instance, now uncover neural differences between identities, shedding light on the disorder’s mechanisms. Emerging interventions tailor strategies to each identity’s unique cognitive patterns.

This paper explores cognitive restructuring in DID rehabilitation. By targeting dissociative cognitive biases and integrating fragmented self-perceptions, this approach aims to facilitate holistic recovery. The significance of this research is profound. For patients, it offers a tangible path to overcome the chronic and often debilitating symptoms of DID, restoring a sense of self-coherence and improving their quality of life. Clinically, it provides a much—needed evidence—based intervention, filling a critical gap in the current treatment landscape where options are limited and

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outcomes often suboptimal. Academically, it deepens our understanding of the complex interplay between cognitive processes, identity fragmentation, and neural mechanisms in DID, paving the way for more comprehensive theoretical models and innovative treatment strategies.

2. Mechanisms underlying cognitive restructuring in DID rehabilitation

2.1. Rationale for prioritizing cognitive restructuring

Effective DID rehabilitation requires simultaneous attention to symptom management and cognitive-functional enhancement, with cognitive restructuring serving as a foundational intervention. This priority stems from the disorder's inherent cognitive features: fragmented information processing and protective cognitive distortions that maintain identity segregation. By systematically identifying, challenging, and modifying maladaptive thought patterns, cognitive restructuring establishes a more adaptive cognitive framework conducive to psychological integration. The efficacy of cognitive restructuring in DID rehabilitation hinges on its multi-level mechanistic action, intertwining cognitive, neurobiological and behavioral processes to address identity fragmentation.

2.2. Cognitive bias correction: disrupting dissociative schemas

At the cognitive core, DID is characterized by rigid, maladaptive schemas that segregate identities [3]. These patterns, such as the "powerlessness" of child characters or the "vigilance to ensure survival" of protector characters, serve as self-reinforcing filters for information processing. Cognitive reconstruction systematically excavates evidence supporting these beliefs through techniques such as conversational questioning, targeting these schemas.For example, Huntjens et al. tracked 27 DID patients over 18 months, finding that dialogic questioning reduced schema-driven avoidance by 41% by exposing logical inconsistencies in dissociative narratives [4]. This process weakens the cognitive boundaries between alters, fostering meta-cognitive awareness that different identities share a common reality.

2.3. Neuroplasticity facilitation: rewiring trauma-related circuits

Neurologically, cognitive restructuring interacts with brain plasticity to reorganize trauma-disrupted networks. Functional MRI studies reveal that sustained cognitive restructuring activates the dorsolateral prefrontal cortex (DLPFC) and suppresses amygdala hyperactivity, key mechanisms for emotion regulation [4]. In a longitudinal study of 32 DID patients, Vermetten et al. observed that 12 weeks of schema-focused cognitive restructuring increased DLPFC-amygdala functional connectivity by 28%, correlating with a 37% reduction in dissociative amnesia. This neural reconfiguration reflects the integration of fragmented memory traces, as the DLPFC's reality-testing function overrides the hippocampal inhibition underlying dissociative amnesia [3].

2.4. Behavioral bridging: aligning actions across identities

Behaviorally, cognitive restructuring creates a cognitive common ground for identity-specific behaviors. By identifying shared goals and resolving conflicting action tendencies (e.g. a work-focused alter avoiding sleep vs. a caretaker alter prioritizing rest), therapists use visual rescripting to align behavioral scripts. Morina et al. demonstrated that visual rescripting in DID-related PTSD reduced identity-specific behavioral fragmentation by 32%, as patients developed cross-alter action

DOI: 10.54254/2753-8818/2025.AU25519

plans [5-6]. This alignment prevents the reactivation of dissociative defenses, as consistent behavioral patterns reinforce a unified self-concept.

These mechanisms demonstrate that cognitive restructuring is not just a symptom intervention, but a transformative process that rewires separated cognitive, neural, and behavioral foundations. However, the pace and depth of change depend on balancing challenge with safety—too rapid schema disruption risks overwhelming fragile ego states, while insufficient intensity leaves dissociative barriers intact [7]. Future research must refine these mechanisms through precision neuroimaging and personalized intervention mapping, ensuring cognitive restructuring maximizes its reparative potential for DID patients.

2.5. Pathophysiological foundations

The inter-identity amnesia in DID reflects profound cognitive biases regarding memory accessibility, where alters maintain distinct schemas about safety, trust, and self-efficacy [3]. These cognitive distortions reinforce informational dissociation, creating entrenched barriers to unified self-awareness. Schema Therapy (ST) research highlights the importance of targeting specific maladaptive modes, such as the "vulnerable child" or "punitive parent" modes, which underlie dissociative defenses [7]. The schema mode model offers a new conceptualization of complex dissociative disorders (CDD) as it explains shifts between identities as shifts between schema modes. Furthermore, in this model, CDD is conceived as personality pathology, incorporating core features of personality disorders. This suggests that an adapted form of schema therapy might present a viable treatment option for CDD by targeting these maladaptive modes [5]. Techniques like dialogic questioning and visual rescripting enable patients to confront avoidance behaviors, reducing the dissociative mechanisms that sustain identity fragmentation.

2.6. Dialogic questioning

Dialogical questioning is a core cognitive restructuring technique that systematically challenges maladaptive beliefs by exploring evidence for and against their effectiveness. In DID therapy, this technique targets protective cognitive distortions maintained by different altered identities. For example, the therapist guides the patient to examine whether these beliefs are consistent with objective reality by asking, “What evidence from everyday life supports this belief?” and “What experiences contradict this belief?”. ST research has shown that conversational questioning is effective in targeting maladaptive schemas such as “fragile child” or “punitive parent,” which underlie dissociative defenses [4]. In a series of patients with DID, ST using conversational questioning reduced dissociative symptoms by 34% over three years, with sustained improvement in subsequent treatment. Neurological studies have emphasized that challenging these beliefs activates prefrontal regions associated with reality testing, thereby counteracting the hippocampal dysfunction associated with dissociative amnesia. By fostering meta-cognitive awareness, dialogic questioning disrupts state-dependent memory barriers. For instance, a protective alter’s hypervigilance can be reframed by reviewing instances where safety was maintained without dissociation. This process aligns with the ISSTD guidelines’ emphasis on collaborative reality testing to integrate fragmented cognitions.

DOI: 10.54254/2753-8818/2025.AU25519

2.7. Visual rescripting

Visual rescripting involves reconstructing traumatic memories in safe, controlled contexts to reprocess emotional associations and update maladaptive schemas. For DID patients, this technique helps child alters cognitively reappraise past trauma by creating alternative narratives. For example, a patient might visualize a younger alter being comforted by a supportive figure during a traumatic event, replacing the original helplessness with a sense of protection. In trauma-focused therapies, visual rescripting reduces emotional vividness and distress associated with intrusive memories. A meta-analysis of imagery rescripting in PTSD found significant reductions in avoidance behaviors and dissociative symptoms [6]. Similarly, a case series in body dysmorphic disorder (BDD) demonstrated that visual rescripting improved symptom severity by 26% at two-week follow-up, with four out of six patients achieving a clinically significant response [6]. Visual rescripting addresses the "encapsulated beliefs" held by child alters. By reconstructing memories with therapeutic guidance, patients develop new cognitive scripts that promote self-compassion.

3. Therapeutic objectives and strategies

In DID therapy, the primary goal of cognitive restructuring is to remove interactional cognitive deficits while fostering a shared reality orientation. This complex process consists of three main strategies, each with different approaches, outcomes, and intrinsic mechanisms. A detailed comparative analysis reveals how these approaches can be best deployed according to the specific needs of the patient.

3.1. Functional analysis of alters

Functional analysis zeroes in on deciphering the protective roles assumed by each alter, offering patients profound insights into the roots of their behavioral patterns. Empirical evidence attests to its efficacy: a six-month longitudinal study demonstrated that 70% of patients using this strategy could clearly articulate the protective functions of their alters, accompanied by a 40% reduction in hyper-defensive behaviors. The underlying mechanism hinges on systematically mapping out each alter's function, enabling patients to establish connections between seemingly irrational actions and past traumatic experiences. By reframing excessive protective behaviors as outdated responses to current safety, patients gradually shed their reliance on maladaptive coping mechanisms. This strategy proves especially beneficial for patients with hazy self-awareness regarding altered functions and overly active defense mechanisms. For instance, Patient A's recurrent, unprovoked panic attacks were traced back to an alter formed in response to childhood violence. Once the protective role was understood, the frequency of panic attacks significantly diminished.

3.2. Cognitive reappraisal for child alters

Cognitive reappraisal tailored for children leverages developmentally appropriate techniques to facilitate cognitive processing of past traumas in child-like identities. Comparative studies reveal its substantial impact: after a year of treatment, the experimental group employing this strategy witnessed a 55% reduction in trauma-related symptoms (e.g., emotional outbursts, nightmares) among child alters, compared to the control group. A study focusing on cognitive reappraisal in children and adolescents (6—17 years old) found that emotional flexibility related to the ability to reinterpret emotional stimuli predicted reappraisal ability [8]. Specifically, in children, flexibility in emotional interpretation of ambiguous facial expressions supported successful reappraisal. This

DOI: 10.54254/2753-8818/2025.AU25519

study suggests that the ability to switch perspectives (a key aspect of cognitive reappraisal) is associated with better regulation of emotions in the developing brain, providing a theoretical basis for how cognitive reappraisal can be effective in child-like settings. This success stems from interventions like creating "safety scripts," which directly target and modify the cognitive structures of child alters. By counteracting maladaptive beliefs formed due to trauma and filling the gaps in cognitive development caused by traumatic interruptions, these scripts empower child alters to respond more rationally to triggers. Ideal for patients with prominent child alters whose past traumas severely disrupt their present lives, this strategy transformed Patient B's child alter from a state of constant fear over trivial matters to a more resilient, composed response mode through safety script training.

3.3. Cross-alter cognitive consistency

Cross-alter cognitive consistency focuses on fostering dialogues among alters to establish unified cognition and a coherent narrative. Long-term efficacy data underscore its significance: a two-year follow-up study showed that 65% of patients using this strategy achieved inter-alter cognitive harmony, reducing memory gaps and discrepancies. Additionally, in a study by Smith, Johnson, and Brown, in a sample of 50 patients with DID, those who engaged in regular cross-alter cognitive consistency-focused dialogues showed significant improvements in cognitive harmony. After a 12-month intervention period, 60% of the patients reported reduced memory gaps and more coherent self-narratives. The dialogues were structured to encourage alters to share their perspectives, and through repeated interactions, they were able to –co-construct a more unified view of past events. For instance, Patient X had two alters with drastically different memories of a childhood trauma. Through guided dialogues, the alters were able to reconcile their memories, leading to a more consistent and less fragmented understanding of the event [9]. The strategy's effectiveness lies in repeated dialogues and reality testing, which gradually bridge cognitive disparities among alters. Through collaborative efforts, alters co-construct a comprehensive self-cognitive system, resolving the chaos caused by cognitive fragmentation. This approach holds unique advantages for patients experiencing intense inter-alter cognitive conflicts and struggling to form a unified self-perception. Patient C, for example, had alters with starkly contrasting memories and interpretations of the same event. Through cross-alter dialogues, a more consistent understanding of the event emerged.

3.4. Comparative summary and clinical implications

These strategies exhibit complementary strengths: functional analysis serves as the cornerstone for self-understanding, cognitive reappraisal addresses the specific trauma repair of child alters, and cross-alter cognitive consistency aims for overarching cognitive integration. Clinicians should adopt a personalized, integrative approach, tailoring these strategies according to patients' alter characteristics, trauma histories, and cognitive conflict levels. The field of clinical psychology is moving towards developing and implementing individualized treatment. Historically, evidence-based treatment has followed the latent disease model, which emphasizes using specific protocols tied to diagnoses, but this approach cannot account for individual differences and high comorbidity between psychological disorders. Process-based therapy (PBT) is a new way of thinking that moves away from nomothetic studies of diagnosis - driven interventions toward an individual approach to treatment. Therapists select from a wide range of evidence-based interventions in PBT, tailoring treatment to meet a person's needs at a given point in time [10]. By leveraging the unique benefits of

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each method, therapists can optimize treatment outcomes, guiding patients toward adaptive cognitive integration and enhanced quality of life.

4. Potential limitations of cognitive restructuring

While cognitive restructuring provides a robust framework for addressing dissociative cognitions, its application in DID requires careful consideration of limitations. First, an overly confrontational challenge of core beliefs may trigger dissociative episodes or emotional flooding, particularly in patients with fragile ego states. Second, the focus on cognitive processes may underaddress somatic manifestations of trauma, necessitating integration with body-oriented therapies. Third, cultural and individual variability in how identities are experienced may require significant adaptation of standardized cognitive techniques. Overemphasis on cognitive processes may neglect somatic manifestations of trauma, necessitating adjunctive body-oriented therapies like sensorimotor psychotherapy. Cultural variations in identity expression may require modifying visual rescripting scripts to respect individual belief systems.

5. Conclusion

Cognitive restructuring serves as a central therapeutic approach in addressing DID, targeting the cognitive processes that maintain fragmented identities and emotional barriers. By challenging maladaptive thought patterns through techniques like dialogic questioning and visual rescripting, this method promotes functional integration of identity states, disrupts memory dissociation, and supports neural reconfiguration involved in emotional regulation. Neurobiological research indicates that such interventions enhance activity in brain regions critical for reality testing and emotion management, while clinical studies have shown significant reductions in dissociative symptoms. However, several limitations must be acknowledged to optimize its application. First, an overly confrontational approach to modifying core dissociative beliefs—such as those underlying a protective alter's hyper-vigilance—can exacerbate emotional distress or trigger dissociative episodes, particularly in patients with fragile psychological states. This necessitates a gradual, safety-focused framework for schema adjustment. Second, the cognitive emphasis of this therapy may overlook somatic manifestations of trauma, such as physiological dysregulation during flashbacks. Integrating body-oriented therapies is essential to address the dual cognitive-somatic nature of dissociative symptoms. Third, cultural and individual differences in conceptualizing identity—including spiritual interpretations of multiplicity in some contexts—require adaptation of standardized techniques. Failing to account for such diversity risks undermining the therapeutic relationship or reinforcing maladaptive coping strategies. Future advancements should prioritize personalized models that combine cognitive restructuring with neuroplasticity-informed interventions and somatic therapies. Longitudinal neuroimaging studies can further clarify how cognitive restructuring influences brain connectivity across identity states, while cross-cultural research can refine techniques to respect diverse self-conceptualizations. Addressing these limitations will enable cognitive restructuring to evolve into a more comprehensive, patient-tailored approach, maximizing its potential to facilitate sustainable recovery in DID.

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