

Integration of Musical Monodrama and Empty Chair Technique: A Multidimensional Intervention Approach for Depression

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Abstract. Depression is a complex disorder triggered by biological, neurological, social, and psychological factors. Traditional treatments such as pharmacotherapy (e.g., SSRIs) and psychotherapy (e.g., CBT) face limitations including side effects, resistance, and reliance on verbal expression. Music therapy, as a non-pharmacological intervention, offers novel potential by modulating brain function through soundwave vibrations and emotional resonance. This paper proposes integrating musical monodrama, a psychodrama technique, with the empty chair method from Gestalt therapy to create a multidimensional intervention for depression. The study addresses three questions: (1) how to externalize emotional conflicts through musical role-dialogue; (2) the mechanisms in improving cognition and behavior; and (3) clinical feasibility. The three-phase design includes pre-treatment assessment, four-step intervention, and continuity interventions. Advantages include bypassing defenses, externalizing self-aggressive emotions, and forming a therapeutic chain from catharsis to cognitive-behavioral change. The approach also reduces stigma in East Asian contexts. Future research should validate neural mechanisms and explore digital personalization.

Keywords: Depression, music therapy, psychodrama, empty chair technique, cognitive restructuring

1. Introduction

According to the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition) and ICD-11 (International Classification of Diseases, 11th Revision), depression is defined as a mental disorder characterized by persistent low mood (or irritability in children/adolescents) or loss of interest/pleasure as core symptoms lasting at least two weeks. It is accompanied by significant cognitive, behavioral, and physiological functional impairments, while excluding similar manifestations caused by other medical conditions or substance abuse [1, 2].

The current treatment of depression primarily relies on medications (e.g., SSRI antidepressants) and psychotherapy (e.g., cognitive behavioral therapy, CBT), but both have significant limitations: medications are ineffective for some patients (treatment-resistant depression) and may cause side effects such as sexual dysfunction and weight gain. Although traditional CBT can improve

cognition, its effects on emotional expression and social functioning reconstruction are limited. In recent years, music therapy has emerged as an important complementary intervention for depression. As a non-pharmaceutical and minimally invasive approach, it acts on the brain through sound wave vibrations, rhythmic synchronization, and emotional resonance.

Against the above backdrop, this paper aims to explore the feasibility of integrating music therapy with psychological techniques (such as the empty chair technique) in the intervention of depression, analyze its potential mechanisms in emotional expression, cognitive restructuring, and behavioral improvement, and provide theoretical foundations and practical references for multidimensional interventions for depression.

2. Multidimensional causes of depression: the interaction of biological-neural-social-psychological factors

2.1. Biological reasons and neuroscientific reasons

From a biological perspective, depression has a genetic predisposition. the heritability of MDD is approximately 30%-40%, with variations across studies. Multiple genetic loci are associated with it, such as the polymorphism of 5-HTTLPR (serotonin transporter gene), which is linked to stress response sensitivity [3]. Some studies also suggest that depression may be strongly associated with polygenic genetic disorders. In terms of neurobiological mechanisms, there are primarily four aspects:

First, neurotransmitter system dysregulation. Patients with depression often exhibit hypoactive serotonin system function (impairing emotional regulation), reduced activity in the norepinephrine pathway (leading to lack of motivation and decreased alertness), and dysfunction in the dopamine reward circuit (causing anhedonia). These abnormalities constitute the pathological basis of the classic "monoamine hypothesis" [4]. Secondly, the hyperactivity of the hypothalamic-pituitary-adrenal axis (HPA axis) leads to excessive secretion of glucocorticoid hormones, which in turn causes a decrease in the sensitivity of glucocorticoid receptors (GR) in the hippocampus, creating a "cortisol toxicity" environment. Third, neuroplasticity and abnormal brain structures. Reduced volume in the dorsolateral prefrontal cortex (dlPFC) impairs cognitive control, while abnormal activity in the ventromedial prefrontal cortex (vmPFC) weakens emotional regulation. In addition, the hippocampus undergoes atrophy (with an average volume reduction of 10-15%) due to hyperactivity of the HPA axis and decreased neurotrophic factors (such as BDNF), impairing its memory consolidation function. The overactivation of the amygdala enhances negative emotional processing, which is significantly correlated with anxiety symptoms. Depression and anxiety disorders are comorbid, with each condition bidirectionally exacerbating the other. Abnormalities in the anterior cingulate cortex (ACC) further aggravate negative self-focus and dysregulation of cognitive conflict.

2.2. Social causes

Social factors primarily encompass three aspects: First, chronic exposure to persistent stressors such as workplace burnout, financial hardship, and relational violence can lead to prolonged activation of the HPA axis, resulting in neurobiological damage [5]. The accumulation of traumatic events also increases the risk of depression, and depression often co-occurs with PTSD. Second, the absence of a social support system significantly raises the incidence of depression, particularly among adults. A

lack of structural systemic support—such as emotional support networks, instrumental assistance, and a sense of community belonging—contributes to higher depression rates [6].

Additionally, systemic social inequalities and structural oppression (e.g., racial discrimination, stress on sexual minorities, and gender-based structural violence) further elevate the risk of depression among adult populations.

2.3. Psychological causes

The psychological aspect primarily involves two dimensions:

First, learned helplessness. When individuals repeatedly experience uncontrollable negative events, they develop a misperception of "no connection between behavior and outcome," attributing failures to internal factors ("I am incompetent"), stable cognition ("bad things cannot be changed"), and pervasive negative factors, thereby losing their ability to cope.

Second, barriers to diagnosis and treatment are caused by cultural stigma. In East Asian cultures, depression is often viewed as a sign of "weak willpower," leading patients to delay seeking medical help or develop self-loathing. This self-stigmatization may internalize societal prejudices, resulting in feelings of shame, which can exacerbate symptoms or cause patients to discontinue treatment.

3. Music therapy

3.1. Technical classification of music therapy

The technical system of music therapy can be divided into four categories: receptive music therapy, re-creative music therapy, improvisational music therapy, and CBT-MT integrated therapy [7]:

Receptive music therapy elicits physiological or psychological responses by listening to specific structured music (such as classical music or natural sounds). Re-creative music therapy rebuilds daily behavioral abilities through singing or playing familiar pieces (such as nursery rhymes or pop songs). Improvisational music therapy activates the lateral prefrontal cortex and sensorimotor cortex through unstructured instrument playing (such as tambourines or xylophones), helping patients release subconscious emotions. CBT-MT integrated therapy incorporates musical elements into the CBT framework, such as using a music mood diary to record music-triggered events, emotional responses, and automatic thoughts, guiding patients to identify and restructure negative cognitions.

Music psychodrama represents an advanced integration of the aforementioned techniques, particularly suited for group therapy. At its core lies the principle of "music as an emotional language, replacing or supplementing verbal expression." It externalizes subconscious conflicts through music, role-playing, and improvisation, thereby facilitating emotional expression and the reconstruction of social functioning. Individual therapy often focuses on personal trauma and the restructuring of negative cognitions, whereas group therapy rebuilds social support systems through activities such as choral singing and ensemble performances.

3.2. Therapeutic mechanisms of Musical Monodrama

This paper combines the Music Monodrama technique from music psychodrama with the Empty Chair Technique, proposing an intervention approach primarily centered on music monodrama. The Empty Chair Technique originates from Gestalt Therapy. It externalizes internal conflicts through role separation and dialogue, helping individuals release repressed emotions and resolve inner conflicts [8, 9].

Its main forms include "ventilation through confession" (unexpressed emotions), "selfdialogue" (inner value conflicts), and "dialogue with others" (interpersonal relationship improvement). The advantage of this technique lies in breaking through the limitations of traditional verbal expression—by utilizing spatial arrangement and role-playing, it creates a therapeutic space where patients can "safely confront" psychological conflicts. Musical Monodrama, as the core individual intervention in music psychodrama, focuses on the 'dialogue between the self and the problem.' Through independent musical performance or singing, the patient engages in symbolic interaction with the 'problem role.'

The integration of the Empty Chair technique and musical monodrama is grounded in a shared hypothesis: psychological issues stem from unprocessed emotional conflicts, while healing arises from the externalization and restructuring of these conflicts. The Empty Chair technique provides a structural framework for role separation and dialogue, whereas musical monodrama contributes a medium for non-verbal expression. Together, they mutually reinforce each other, forming a comprehensive intervention for addressing hostile and fearful emotions in patients with depression. This integration is suitable for individuals with depression due to the following reasons: First, the non-verbal nature of music can bypass "rumination" and "excessive verbalization"; second, role separation allows for the safe externalization of self-aggression and hostile emotions; third, the program establishes a therapeutic chain from emotional catharsis to cognitive restructuring and then to behavioral change.

Depression patients often fall into a vicious cycle of "self-attack and social withdrawal." Integrated interventions can use symbolic roles to channel hostile emotions and achieve richer, more multidimensional emotional expression through musical dialogue.

4. Session design

4.1. Before the session: evaluation and target anchoring

Before formally commencing treatment, the therapist can conduct the assessment in three steps. First, establish the patient's "functional baseline" by measuring physiological benchmark indicators or using the SDSS scale. This includes evaluating physiological functions (such as sleep and dietary regularity), behavioral functions (such as frequency of social interactions), and psychological functions (such as daily engagement in pleasurable activities), as well as assessing social functioning deficits (such as work ability, family relationships, and self-care capacity).

Secondly, the PHQ-9 scale and SCL-90 scale were used to assess psychological status, with a focus on factors of depression, anxiety, and somatization. Additionally, the "Emotion Thermometer" was employed for self-assessment to intuitively reflect emotional changes before and after treatment. Third, assess the patient's musical background, preferences, and sensitivity by employing "music emotion analysis" technology. This allows patients to select or create music that reflects their current emotional state, thereby capturing nuanced emotional experiences that traditional questionnaires may fail to obtain.

At the same time, it is necessary to consider the patient's acceptance of the empty chair technique. A brief "two-chair dialogue" exercise can be conducted to observe their level of role separation and imagination, which will help determine the specific form of subsequent technique integration.

For those who respond positively to music but struggle with role-playing, starting with musical monologues can be an option. And for those who are highly receptive to the empty chair technique but less familiar with musical expression, starting with rhythmic dialogue is recommended. The physical environment also needs to be prepared, such as with two distinctly different chairs and a

variety of musical instruments, to enhance role differentiation and meet the needs of diverse emotional expressions.

4.2. In the session: four-step intervention from relaxation to cognitive restructuring

The treatment is conducted once a week, with each session lasting 60 minutes, divided into warm-up, emotional arousal, core intervention, and reflective integration.

4.2.1. Warm-up: passive muscle relaxation with music-guided imagery

Progressive Muscle Relaxation (PMR) combined with alpha wave music reduces sympathetic nervous activity through respiratory synchronization training [10]. During the procedure, patients close their eyes and sequentially tense and relax their muscles while listening to and visualizing a "safe scene," enhancing the relaxation effect through the integration of visual and auditory stimuli.

The objective of this phase is to reduce physiological arousal indicators such as heart rate and blood pressure, creating a safe and controlled environment for subsequent emotional expression. Music warm-up, on the other hand, employs techniques like improvisational instrument playing or music imagery to help patients transition into a state of emotional expression. For example, the therapist may invite the patient to select an instrument from a variety of options and improvise a "musical self-portrait" that reflects their current state of mind or to listen to a piece of emotionally evocative music and then share their associations and feelings.

4.2.2. Core intervention 1: musical empty chair and "role dialogue" in Monodrama

The patient selects two musical instruments and places them in front of the "empty chairs" on either side of the room. They then engage in a dialogue between their "self" and the "presenting role," conveying emotions through variations in the timbre and rhythm of the instruments or their own singing.

The therapist identifies potential hostile or fearful emotional focal points by observing the patient's emotional responses in musical expression (such as repetition of specific themes, sudden changes in musical intensity, or conflicting performance styles) and negotiates with the patient to determine the "presenting role."

The process of role establishment should respect the patient's autonomy and readiness, avoiding premature confrontation that may trigger resistance.

4.2.3. Core intervention 2: improvised monologue creation

The patient interacts with the "chief complaint role" through improvised singing or instrumental performance in preset scenarios to express emotions and advance the plot.

The therapist guides the patient in self-awareness by observing rhythmic evolution (e.g., from chaos to order) and dynamic volume changes during the performance.

For example, when the patient plays a series of consecutive eighth notes, the therapist can appropriately ask, "What images come to mind at this moment?" This process significantly enhances cognitive control in depressed patients by activating the lateral prefrontal cortex (responsible for goal monitoring) and the sensorimotor cortex (which coordinates action execution). At the same time, rhythmic synchronization activates the mirror neuron system, fostering emotional resonance and social connection.

This whole core intervention phase is the critical juncture where technology integration comes into play, encompassing three fundamental integration models: "Music-Assisted Empty Chair Dialogue," "Role-Based Musical Monologue," and "Alternating Integrated Intervention." The music-assisted empty chair dialogue builds upon the traditional empty chair technique by incorporating musical expression. As the patient switches roles between chairs, they convey the emotions and attitudes of each role not only through words but also through music. The character-based musical monodrama primarily revolves around music composition as its main framework, incorporating the technique of role separation—patients are guided to associate different musical themes with distinct "parts of the self" within them while performing.

The application of techniques in the core intervention phase should adhere to the integrated principle of "Emotion-Cognition-Behavior": musical elements are primarily used to activate and express emotions (e.g., using dissonance to depict conflict), empty-chair dialogues are mainly employed for cognitive restructuring (e.g., role-switching to gain new perspectives), while the combination of both facilitates behavioral change (e.g., creating "coping-themed music" for use in real-life situations).

The therapist should closely monitor the patient's emotional state and receptiveness, guiding them toward musical relaxation when emotions become overly activated, increasing the frequency of role-switching during cognitive fixation, and encouraging small-step attempts when behavioral avoidance occurs. The focus of each intervention should be dynamically adjusted based on the patient's real-time responses, rather than mechanically executing a predetermined plan.

4.2.4. Reflective integration: joint listening and impact discussion

At the conclusion of the therapy session, the therapist begins by playing the audio or video recording of the therapeutic process, which has been previously approved by the patient. This is done to guide the patient in observing their own physical state (such as muscle tension and breathing rhythm) and musical expression characteristics (such as sudden changes in rhythm or variations in volume intensity) during the performance. This approach aligns with therapeutic practices where recordings are used to help patients reflect on their behaviors and emotional responses, providing new perspectives and facilitating emotional expression. The method is particularly noted in music therapy, where observing physical and musical responses can help assess progress and adjust treatment plans. This playback observation process not only helps patients re-examine their self-expression patterns from a third-party perspective but also activates the episodic memory encoding function of the hippocampus, thereby enhancing metacognitive monitoring of emotional events.

Then, the session moves into an open sharing segment. Patients are required to describe the associations that arise when they role-play problematic characters (e.g., "When drumming, I recalled scenes of being denied in childhood") and their physical sensations during improvisation (e.g., "When singing high notes, my throat tightened, as if suppressed anger was about to burst out"). The therapist then deepens the patient's emotional awareness through empathetic feedback (e.g., "It sounds like that 'harsh self' made your breathing become rapid").

Finally, the therapist incorporated CBT techniques to guide cognitive restructuring:

translating the musical experience into actionable cognitive adjustments. For instance, in response to a patient's automatic thought such as "I can't control my anger," the therapist might contrast this with the factual transition from chaotic rhythms to smooth melodies during their musical performance, posing a challenge: "When the drumbeats shift from frantic to calm, you're actually regulating your emotions—doesn't this suggest you possess an unrecognized capacity for

self-control?" This approach dismantles the negative core belief of "I am incapable" while fostering a new adaptive cognition.

At the cognitive level, the integration of CBT techniques with psychodrama music techniques has yielded significant improvements in cognitive flexibility and self-concept transformation. The cognitive patterns of individuals with depression often manifest as overgeneralization, polarized thinking, and negative self-schemas. These cognitive biases perpetuate the persistence of depressive symptoms.

The empty chair technique enables patients to step outside their own subjective judgments as much as possible through role reversal, allowing them to view the same issue from multiple perspectives and break cognitive rigidity. For example, when patients switch from the role of "self-critic" to that of "the criticized," they often spontaneously revise their originally extreme negative cognitions. The musical monologue provides an experiential foundation for cognitive restructuring through musical metaphors—patients not only rationally "know" they need to change, but can also emotionally "feel" the possibility of transformation.

CBT technology builds upon this foundation as a process of transferring and deepening the previous phase of treatment. It aims to guide the integration of prior therapeutic work, thereby elevating the modified negative cognitions to a consciously perceptible level. This achieves a cognitive reinforcement process—from abstract to concrete, and from nonexistent to tangible. Particularly noteworthy is the enhancement effect of this integration technique on "self-complexity"—through exposure to diverse internal "self-parts" (such as self-aspects manifested by different musical themes), patients establish a more multifaceted and flexible self-concept, thereby strengthening psychological resilience in coping with adversity.

4.3. After the session: continuous intervention from hospital to daily life

The goal of the consolidation phase is to transfer therapeutic outcomes into daily life. After treatment, a closed loop is formed through "recording-feedback-reinforcement."

The homework design includes: (1) Music Journal: Patients are to record their daily "Emotional Thermometer" scores, reflections on listening to a designated playlist, and real-life events that trigger emotional responses. This method helps identify triggering situations, disrupt automatic negative emotional reaction patterns, and establish a cognitive connection between "context-music-emotion regulation," thereby enhancing self-regulation skills. (2) Behavioral Activation (BA): Encourage patients to bring an "anti-depression playlist" to participate in community activities, breaking the cycle of "avoidance-anhedonia." During phased reviews, the therapist and patient examine changes in the "Victory Benchmark Index" (e.g., sleep duration, frequency of social interactions) to adjust subsequent intervention priorities. The social neural synchronization effect of music can reduce social anxiety and enhance a sense of group belonging, thereby helping patients gradually break the vicious cycle of "avoidance-anhedonia."

5. Conclusion

Depression, as a complex and multidimensional disorder, arises from the interplay of biological, neurological, social, and psychological factors. While traditional interventions have demonstrated certain efficacy, they still present limitations, including medication side effects, treatment resistance, and the reliance on verbal expression in psychotherapy.

In response to these issues, this paper proposes an innovative approach that integrates music therapy with the empty chair technique—Musical Monologue. The method facilitates patients in

externalizing emotional conflicts, restructuring cognition, and promoting behavioral changes through non-verbal mediums and role-dialogue mechanisms.

It specifically includes three stages: first, clarifying the treatment direction through assessment and goal anchoring; second, implementing a four-step intervention process during therapy (passive relaxation-music and empty chair dialogue-improvisation-reflection and integration); and finally, transferring the therapeutic effects to daily life through continuity interventions (such as music journals, behavioral activation, and periodic reviews).

This integrated approach not only provides a clear implementation pathway but also compensates for the shortcomings of traditional therapies by activating key brain regions through multimodal stimulation from music. The advantages of this approach lie in its nonverbal nature (bypassing verbal defenses), emotional safety (externalizing aggressive emotions through music), and systematic framework (a complete chain from emotional catharsis to cognitive-behavioral change). Particularly for patients in East Asian cultures who avoid treatment due to stigma, the musical medium can reduce feelings of shame and enhance treatment adherence.

However, the current approach has certain limitations: Firstly, the design is primarily based on theoretical integration and clinical observation, lacking empirical data to support its long-term efficacy. Secondly, individual differences (such as musical preferences and types of trauma) may influence treatment outcomes, necessitating future exploration of personalized adjustments to parameters like instrument selection and session frequency. Thirdly, there is a need to further validate its neural mechanisms (e.g., improvements in HPA axis function) and behavioral indicators (e.g., social interaction frequency) by incorporating methods such as fMRI and ecological momentary assessment (EMA). In the future, digital tools and wearable health technologies can also be explored to assist in personalized interventions, thereby enhancing treatment efficacy and expanding their scope of application.

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