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Article

Application of Re-Creative Music Therapy in Emotion Management—A Single-Case Action Research Study Based on Song Re-Creation Techniques

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Abstract: This study adopted a single-case action research design to explore the effects of song re-creation, a technique within re-creative music therapy, on emotion regulation. The participant was a 17-year-old female adolescent experiencing pronounced anxiety symptoms related to academic stress, including physiological responses like accelerated heart rate and rapid breathing, and cognitive manifestations like difficulty concentrating. Drawing on therapeutic principles of song re-creation, catharsis theory, and self-determination theory, an intervention was developed around the Cantonese song *A Love Before Time*. The intervention comprised three components: song selection, lyric modification, and melodic adaptation. The original theme of unattainable love was metaphorically linked to the participant's anxiety from unattained academic goals, allowing her to incorporate anxious experiences into rewritten lyrics. During the 60-minute intervention, the participant revised lyrics to reflect her emotional state and incorporated coping strategies like deep breathing. Melodic elements, including tempo and pitch, were adjusted to enhance emotional expressiveness. Changes in emotion before and after the intervention were documented using an emotion-rating scale, physiological indicators, and qualitative interviews. Following the intervention, the participant's anxiety rating decreased from 8 to 5, and heart rate declined from 95 to 78 beats per minute, indicating a meaningful immediate reduction in anxiety. Findings provide preliminary reference for re-creative music therapy in emotion management among students, suggesting song re-creation helps individuals externalize emotions and strengthen active coping capacity.

Keywords: music therapy; emotion management; anxiety; music recreation; case study

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1. Introduction

Music therapy is an interdisciplinary field integrating psychology, medicine, and musicology, and in recent years it has demonstrated promising effects in emotional well-being support. Professional certification systems for music therapists have been established in numerous countries and regions worldwide. Re-creative music therapy has attracted growing attention due to its emphasis on individual initiative and creative expression. In China, mental health concerns among adolescent students have become increasingly prominent. Recent national educational surveys indicate that a substantial proportion of adolescents report moderate or higher levels of emotional distress, with academic demands, interpersonal expectations, and scheduling pressures identified as key contributing factors. Although conventional psychological support approaches can be effective, they may present challenges in facilitating expressive processing and maintaining sustained student participation. Accordingly, there is a need to explore more engaging and supportive approaches to emotional well-being [1].

Unlike receptive music therapy, re-creative music therapy emphasizes emotional well-being and psychological comfort through active musical participation [1]. Song re-creation is one important technique, grounded in both catharsis-oriented and motivation-supportive frameworks. On the one hand, modifying lyrics and adapting melodic features enables symbolic expression of inner experiences, transforming subjective feelings into tangible musical forms. On the other hand, guiding choices about creative content and expressive methods supports perceived competence and self-directed involvement, thereby enhancing participation and continuity in the process. However, research on the application of song re-creation for emotional well-being remains limited, particularly single-case investigations focusing on adolescent students experiencing academic-related emotional distress. This study therefore selected a student experiencing such distress and used a single-case action research design to examine the role and immediate outcomes of song re-creation in supporting emotional well-being, with the aim of providing practical guidance for integrating re-creative music therapy into school-based support practices.

2. Literature Review and Theoretical Foundations

2.1. Development of Re-Creative Music Therapy

Re-creative music therapy is an important area of music therapy and has gradually developed into an established psychotherapeutic approach since the 1970s. The music therapy sector has expanded rapidly over the past five years. Global market reports indicate that from 2019 to 2024, demand for music therapy services grew at an average annual rate of 15.3%, while the market expanded from US\$280 million to US\$570 million. In China, the number of registered music therapists increased from 320 in 2019 to 890 in 2024, representing a 178% increase, and re-creative music therapy techniques reportedly accounted for more than 40% of applications [2].

The theoretical foundations of re-creative music therapy can be summarized in three core concepts: creative expression, emotional articulation, and active participation. The Nordoff–Robbins model of creative music therapy emphasizes the use of musical creativity to activate an individual's inner creative potential, thereby enhancing self-awareness and the capacity for emotional balance. Because music-making can provide a relatively safe form of emotional articulation, individuals may be able to explore internal experiences in a supportive environment. Song re-creation is one important technique within re-creative music therapy. By rearranging or rewriting an existing song, therapeutic goals can be integrated with artistic expression. Recent studies have also reported beneficial effects of song re-creation for emotional well-being, with emotional balance showing an average improvement rate of 32.4%.

Catharsis theory provides an important conceptual basis for re-creative music therapy. Originating in the psychoanalytic concept of catharsis, the theory holds that healthy emotional expression is essential to psychological balance. In song re-creation, individuals can symbolically express inner experience by modifying lyrics and changing melodic features. Self-determination theory also offers a useful explanatory framework. It proposes three basic psychological needs—agency, mastery, and connection—all of which can potentially be supported through musical creation [3]. Recent research further suggests that music-making can activate neural reward circuits and emotion-processing networks, including the prefrontal cortex, amygdala, and hippocampus, providing neurobiological support for the potential effectiveness of re-creative music therapy.

2.2. Therapeutic Mechanisms of Song Re-Creation

Song re-creation is a core technique within re-creative music therapy and integrates principles from multiple psychological frameworks. Recent empirical investigations into its application for emotional well-being have indicated a high level of observed benefit, with a substantial proportion of participants reporting notable improvements in emotional stability. By activating creative capacities, this approach supports deeper self-awareness and constructive emotional engagement, making it a valuable adjunct to standard psychological interventions. Music therapy has also gained increasing

recognition among adolescent populations [4]. Market analyses indicate steady growth in global adoption, with adolescent emotional challenges linked to academic demands representing a significant segment of clinical applications.

Neurophysiologically, song re-creation engages distributed neural networks associated with affective experience and executive function. As individuals articulate internal states through lyrical composition, limbic activation—particularly involving structures responsive to emotional salience—may be dynamically coordinated by regulatory activity in prefrontal regions, supporting a progression from affective awareness to cognitive integration and expressive articulation. Melodic adaptation further refines this process: intentional modulation of pitch, rhythm, and timbre enables more nuanced emotional expression and facilitates the organization of transient affective experiences into coherent musical structures. This form of creative engagement has been correlated with measurable shifts in neuroendocrine activity, including reductions in stress-related biomarkers and increases in neurotransmitters associated with mood balance and motivation. Consequently, the therapeutic utility of song re-creation operates on two interrelated levels: first, the act of creation fosters emotional articulation and adaptive cognitive reframing; second, the resulting musical artifact serves as a stable, reusable resource for sustained emotional grounding and psychological resilience [5].

2.3. Current Applications of Music Therapy in Emotion Management

In recent years, music therapy has received increasing attention as a nonpharmacological approach for supporting emotional well-being. Global practice data indicate that by 2023, music therapy was being applied in over 80 countries, with emotional well-being support representing more than 65% of service recipients. Applications in this domain primarily address states such as heightened nervousness, low mood, and psychological tension. Musical elements—including rhythm, melody, and harmony—are employed to engage brain regions associated with emotion processing and modulate neurochemical activity, thereby facilitating improvements in emotional experience [6]. Receptive approaches currently predominate in clinical settings, accounting for approximately 70% of emotion-focused applications; these typically involve the selection of music with specific rhythmic or acoustic properties to support positive emotional responses.

With growing emphasis on individualized support, re-creative music-based methods have gained increased recognition for their contribution to emotional well-being [7]. Research conducted between 2019 and 2024 suggests that actively participatory music experiences may yield longer-lasting supportive outcomes. Among these, song-based creative activities have drawn particular interest due to their high degree of personal relevance and capacity for expressive engagement. International studies report measurable reductions in self-reported nervousness among adolescents following such activities, with average decreases of approximately 42% and sustained benefits observed beyond six weeks. Although music therapy as a formal discipline emerged later in China, its development has been rapid. Data from professional networks indicate that the number of registered music therapists increased by 156% between 2020 and 2024; about 45% of practitioners now focus specifically on emotional well-being support, primarily within university health centers, medical institutions, and psychological support services.

2.4. Integrating Catharsis Theory and Self-Determination Theory

The theoretical foundation for emotion-oriented approaches in higher-education settings has grown increasingly diverse. Combining catharsis-oriented perspectives with self-determination frameworks offers a constructive basis for re-creative music-based support and aligns well with song re-creation methods [8]. Catharsis-oriented perspectives suggest that internal emotional states may be eased through symbolic expression; within song re-creation, adapting lyrics and reshaping melodies serve as such expressive channels. When the participant reframed the original theme of “loving but being unable to attain” into the academic context of “striving but being unable to attain,” her emotional experience found articulation and resolution through symbolic means.

Concurrently, the three core psychological supports emphasized in self-determination frameworks—voluntary participation, perceived effectiveness, and interpersonal connection—can be fostered during song re-creation. The participant selects creative elements, acquires music-supported coping strategies, and engages collaboratively with the therapist, thereby enhancing involvement and strengthening personal coping capacities. This combined conceptual approach may thus support the integration of music-based support into mental wellness initiatives within educational environments.

3. Research Design and Methods

3.1. Research Design Framework

This study adopted a single-case action research design rooted in reflexive practice, implementing re-creative music therapy within the researcher’s direct professional engagement. The music therapy field in China has experienced rapid development in recent years, with the domestic market expanding at an average annual rate of approximately 23.5% over the past five years; individuals with higher education levels constitute a significant portion of those seeking support for emotional well-being. The theoretical foundation integrated principles of song re-creation, cathartic expression, and self-determination. The therapeutic process comprised three core components: song selection, lyric modification, and melodic adaptation [9].

A pre–post quasi-experimental approach was applied with one 17-year-old female adolescent reporting heightened emotional sensitivity associated with academic pressure. The participant engaged in a single 60-minute session following a standardized sequence: 15 minutes of preparatory discussion, 20 minutes of lyric modification, 20 minutes of melodic adaptation, and 5 minutes of audio recording and reflective sharing. Outcome evaluation included an emotion-rating scale, physiological indicators, and semi-structured qualitative interviews to capture multidimensional responses [10]. The design adhered to established music therapy practice standards while accommodating the methodological requirements of single-case inquiry (As shown in Table 1).

Table 1. Research Design Elements and Operational Indicators

Design element	Details	Operational indicator	Measurement point
Participant	17-year-old female adolescent with academic-anxiety symptoms	Anxiety score ≥ 7 ; heart rate ≥ 90 bpm	Pre-intervention screening
Intervention	Song re-creation based on A Love Before Time	Completion of lyric modification; level of melodic adaptation	During intervention
Assessment tool	Emotion-rating scale	10-point self-rated anxiety scale	Pre- and post-intervention
Physiological measures	Heart-rate variability monitoring	Heart rate; respiratory rate	Pre-, during, and post-intervention
Qualitative assessment	Semi-structured interview	Subjective experience; mastery of coping strategies	24 hours post-intervention
Environmental control	Standardized treatment environment	25°C; no disturbance; complete equipment setup	Throughout intervention

3.2. Participant Characteristics

The participant was a 17-year-old female high school student in Grade 11 in Beijing who exhibited elevated levels of emotional tension. As academic expectations on adolescents have increased, concerns regarding students’ psychological well-being have grown more prominent. Survey data collected across mainland China from 2019 to 2024

indicated that approximately 31.2% of high school students reported persistent emotional tension, with academic demands identified as the primary contributing factor in about 68.5% of those instances [11]. During the three months prior to the therapeutic activity, the participant frequently experienced heightened emotional tension linked to coursework and examinations. Physiologically, she showed signs of autonomic activation, including an elevated resting heart rate of 95 beats per minute during study sessions and shallow, rapid breathing. Cognitively, she engaged in frequent time-checking and expressed persistent concerns about task completion within expected timeframes. Behaviorally, she displayed reduced tolerance during peer interactions and demonstrated mild withdrawal from social engagement.

Participant selection adhered to predefined criteria: absence of diagnosed psychiatric conditions, no concurrent use of pharmacological agents affecting emotional processing, and no occurrence of significant life changes in the preceding month [12]. These criteria were applied to minimize extraneous influences on observed responses to the therapeutic activity. The participant possessed foundational musical experience and familiarity with song form and melodic development, supporting effective participation in song-based creative expression. Her emotional tension symptoms were clearly observable but fell within a moderate range, rendering her an appropriate candidate for this preliminary application of re-creative music-based support.

3.3. Intervention Design

A structured music-based approach was developed grounded in principles of song re-creation, emotional catharsis, and intrinsic motivation. The Cantonese popular song A Love Before Time (Yi Sheng Suo Ai) served as the foundation for re-creation [13]. Its central theme of unfulfilled affection was adapted as a metaphor for academic stress – specifically, the experience of sustained effort without anticipated academic outcomes. The approach aimed to reduce the participant’s self-reported stress level from 8 to 5 following a single session, foster a more adaptive perspective on academic stress, and support acquisition of at least two music-supported coping techniques. It comprised song selection, lyric revision, and melodic adjustment, enabling personalized expression, facilitating emotional processing, and reinforcing capacities for self-direction and mastery.

The approach was delivered in four sequential phases within a single session of no more than one hour. In the preparatory phase, the participant listened repeatedly to the original recording to attune to its affective contours and documented academic stress experiences in an emotion journal. During lyric revision, she adapted textual content while preserving the original song’s structural framework; for instance, the line “Even when we love one another, we cannot draw close” became “I can never settle down to review,” transforming academic stress into lyrical expression, with practical coping methods such as paced breathing integrated directly into the text. In the melodic adjustment phase, tempo and pitch were modified to reflect shifts in emotional tone – accelerated pacing conveyed heightened tension, while decelerated passages signaled grounding and regulation. Finally, the revised version was recorded to support ongoing reflection and consolidation of learning (As shown in Table 2).

Table 2. Implementation Procedure for the Re-creative Music Therapy Intervention

Stage	Time	Main activity	Key procedures	Expected outcome
Preparation	15:00–15:10	Listen to original song; record emotions	Listen to A Love Before Time three times; write down anxiety-provoking situations Maintain A–B–A structure;	Establish emotional resonance
Lyric modification	15:10–15:30	Personalize lyrics	incorporate anxiety experiences and coping strategies	Externalize emotion through expression

Melodic adaptation	15:30–15:50	Adjust rhythm and pitch	Faster rhythm in anxiety passages; slower rhythm in coping passages	Strengthen differentiated emotional expression
Recording and sharing	15:50–16:00	Record and consolidate the product	Piano accompaniment with vocal performance	Consolidate the therapeutic effect

3.4. Data Collection and Measurement Instruments

Multiple methods were used to obtain data and evaluate the effects of re-creative music therapy from physiological, psychological, and behavioral perspectives [14]. Consistent with the requirements of single-case design and the multifaceted nature of music therapy, data collection occurred across three phases: pre-therapy baseline assessment, concurrent documentation during each session, and immediate post-session evaluation, enabling systematic observation of emotional responses throughout the song re-creation process.

Quantitative measures included a researcher-developed 10-point self-report scale for subjective emotional state at each time point, alongside a portable heart-rate monitor to capture physiological responses. Qualitative data were gathered via semi-structured interviews exploring the participant’s experience of lyric modification and melodic adaptation, evolving awareness of emotional states, and emergent personal strategies for emotional regulation. Audio recordings of all song re-creation activities were collected digitally, and an observer rating form was employed to systematically record nonverbal indicators—including facial expression, body movement, and vocal quality—for later analytical review.

3.5. Research Ethics and Quality Control

The study adhered to established ethical principles and quality-control standards for music therapy, prioritizing the participant’s physical and psychological well-being as well as data integrity. Prior to the therapeutic activity, the participant received a comprehensive explanation of the song re-creation process, potential emotional responses, and the right to discontinue participation at any time. Participation was fully voluntary, and the participant was explicitly informed that the activity could be paused or terminated immediately should any discomfort occur [10]. Given that music-based activities may elicit strong emotional responses, supportive measures were prepared, including on-the-spot psychological support and, when indicated, referral to a qualified mental health professional.

Quality-control measures included methodological triangulation using multiple data sources and standardized procedural oversight. The therapeutic activity followed a pre-specified protocol, and all sessions were audio-recorded to ensure fidelity and accuracy of documentation. A structured therapy log recorded session timing, procedural steps, and real-time participant responses, facilitating cross-verification and strengthening the credibility of the findings [11]. Additionally, a 24-hour post-session observation period was implemented to monitor emotional fluctuations and delayed reactions, thereby supporting participant safety and enabling a more comprehensive assessment of the therapeutic activity’s effects.

4. Intervention Process and Case Analysis

4.1. Pre-Intervention Preparation and Baseline Assessment

Demand for mental health support for adolescent students through music-based approaches has increased substantially in recent years. A national survey of adolescent well-being conducted between 2020 and 2024 found that a majority of adolescents reported experiencing notable academic pressure. Preparatory work for the present activity followed established protocols for re-creative music-based practice. Prior to the activity, the participant completed a two-week baseline assessment comprising a

subjective 10-point emotion-rating scale (0 = no tension; 10 = intense tension), physiological measures (heart rate, respiratory rate, and skin conductance), and behavioral observation. During study-related situations, the participant's tension ratings remained approximately 7.8–8.2, resting heart rate ranged from 92 to 98 beats per minute, and respiratory rate ranged from 22 to 25 breaths per minute, consistent with the physiological pattern described in the source manuscript as associated with heightened tension.

The activity was conducted in the participant's home study space. The room temperature was maintained at approximately 25°C (77°F), with adequate lighting and minimal external noise [2]. Equipment included professional recording devices, an electronic piano, a metronome, and physiological monitoring equipment. The selection of *A Love Before Time* followed careful evaluation: its melody is memorable and conducive to emotional engagement; its thematic content resonated with the participant's experience of tension; and its structural simplicity supported adaptation. To enhance the precision of outcome measurement, assessments were scheduled 30 minutes before the activity, every 15 minutes during the activity, immediately afterward, 30 minutes afterward, and 24 hours afterward.

4.2. Song Selection and Analysis

Song selection was guided by the theoretical framework and therapeutic goals. The final choice was *A Love Before Time* (Yi Sheng Suo Ai), a Cantonese popular song composed by Lowell Lo. The song was considered suitable for several reasons. First, its emotional theme is metaphorically adaptable: the original predicament of "loving but being unable to attain" resembles the participant's perceived experience of studying hard without achieving the desired result. This metaphorical correspondence provided a foundation for later lyric adaptation. Structurally, the song follows a typical A–B–A form, with a steady rhythm and flowing melody, allowing localized modifications while preserving the overall musical integrity. Its vocal range, from A3 to F5, was also considered manageable for the participant and supportive of expressive singing.

The analysis focused particularly on the relationship between the original lyrics and the target emotional state. Each line was examined to identify words and emotional meanings that could be replaced or recontextualized. The sense of helplessness conveyed by the original line "Even when we love one another, we cannot draw close" was considered analogous to the participant's expressed difficulty in sustaining focused study, as reflected in the adapted line "I can never settle down to review," thereby establishing an affective bridge between the original song and academic stress. The melody was also examined to identify points where rhythmic adjustments could be introduced. Slightly accelerated pacing was planned for passages representing heightened arousal to support emotional articulation, while more measured pacing was planned for passages representing regulation strategies to foster a sense of stability. This structural analysis provided a clear direction for the subsequent lyric and melodic adaptations.

4.3. Detailed Record of the Lyric Modification Stage

During the lyric modification stage, the participant engaged in core re-creative work [7]. The source manuscript situates this process within the rapid development of music therapy in China, citing data from 2019–2024 indicating an annual market growth rate of 15.8% and a 32.4% increase in demand among adolescent students for support in managing emotional responses. These figures are presented in the manuscript as evidence of growing recognition of professional psychological support.

Lyric modification began with an effort to understand and reframe the emotional meaning of the original song. The imagery in the original lyrics was linked to challenges associated with academic engagement. The adaptation process followed a sequence of "emotional mapping–linguistic reconstruction–prosodic coordination." For example, the original line "Even when we love one another, we cannot draw close" was changed to "I can never settle down to review," while retaining a comparable rhyme relationship in Chinese so that the participant's experience could take a concrete lyrical form. In the

second section, specific self-support strategies were incorporated. A line referring to being “among millions of people” was reframed as “when feelings of unease arise,” followed by the self-support instruction “take a deep breath and count to seven; let the feelings soften with the notes.” The adaptation thus served not only emotional expression but also cognitive restructuring and behavioral support.

The lyric modification stage lasted 20 minutes and involved three rounds of revision. After each revision, the participant softly hummed the new text to determine whether the words fit the melody. The first revision directly described feelings of unease through terms related to academic tasks, examinations, and time management. The second introduced self-support strategies such as deep breathing, pausing intentionally, and offering oneself reassurance. The third refined the structure of the entire song so that the adapted lyrics retained the emotional resonance of the original while also aligning with the participant’s personal therapeutic objectives. During this process, the participant’s self-reported intensity of unease gradually decreased from 8 to 6, suggesting that the act of rewriting the lyrics itself was associated with immediate emotional grounding and created a foundation for the subsequent melodic adaptation.

4.4. Melodic Adaptation and Technical Considerations

Melodic adaptation played a central role in the song re-creation process. While preserving the original key of C major, distinct melodic treatments were applied to sections corresponding to different psychological states. In the first section, conveying heightened physiological arousal, quarter-note movement was replaced with continuous eighth notes to evoke increased rhythmic momentum, mirroring elevated autonomic activity. On the adapted phrase “I can never settle down to review,” E5 served as the highest pitch and was sustained as a whole note, generating an expressive peak through both upward pitch displacement and extended duration.

In the second section, representing regulated self-management, the melodic approach adopted a more grounded and balanced character. Dotted-quarter-note and eighth-note patterns were employed to moderate perceived temporal flow. C4 functioned as the primary pitch center, large intervallic leaps were avoided, and stepwise motion predominated to reflect gradual emotional stabilization. On the phrase “take a deep breath, count to seven,” a descending third coincided with a *diminuendo*, enabling coordinated reduction in both pitch height and dynamic intensity to support physiological calming. The adapted melody underwent iterative evaluation on the piano and was revised three times until its contour consistently reflected the semantic progression of the new lyrics—moving coherently from initial activation to intentional regulatory action [2, 12].

4.5. Experiential Analysis of the Recording and Feedback Stage

Recording and feedback constituted the final phase of the song re-creation activity, completing the cycle of emotional externalization and serving as a meaningful contributor to self-efficacy. The participant completed four recordings of the adapted version of *A Love Before Time*, converting an internal experience into a tangible musical outcome. Physiological and vocal indicators suggested a gradual reduction in physiological arousal across successive takes. During the first recording, vocal tension was observed when singing the adapted line “I can never settle down to review,” accompanied by a heart rate of 85 beats per minute. As the recording process continued, vocal delivery grew increasingly relaxed, and by the fourth take, heart rate had declined to 78 beats per minute. The participant described a distinct sense of ease following the musical expression of her internal experience. Notably, performing the self-composed line “take a deep breath, count to seven; let the worries drift away with the notes” required active engagement in paced breathing, thereby integrating a music-based approach with a well-established self-calming technique.

Post-session self-reflection indicated high satisfaction with the song re-creation activity. The participant noted that articulating her internal experience through lyrical adaptation fostered new insight into academic pressure and enhanced her perceived

capacity to manage it. She further viewed the resulting song as a potentially supportive resource for future use: when similar internal experiences arose, listening to the recording could help reinforce the calming strategies embedded in the lyrics [14]. In this way, the activity supported a transition from passive awareness of internal states to purposeful engagement with a personally crafted musical tool for self-support, a shift that may strengthen adaptive capacities among students.

4.6. Tracking Emotional Change during the Process

Emotional shifts across the song re-creation process followed a stage-based pattern. During the preparation phase—while listening to the original song and documenting emotional responses—the participant reported elevated physiological and behavioral indicators: a self-rated tension level of 8, a resting heart rate of approximately 95 beats per minute, a visibly tense facial expression, and occasional mild hand tremors. During lyric modification, particularly upon revising the original phrase to “I can never settle down to review,” her facial expression gradually softened, the self-rated tension level decreased to 7, and heart rate declined to 88 beats per minute, indicating initial emotional articulation.

The most pronounced emotional shift occurred during melodic adaptation and audio recording. After testing the revised melody on the piano and completing a full recorded version, the self-rated tension level dropped to 5 and heart rate stabilized at 78 beats per minute. Minor recording inconsistencies did not elicit visible frustration; rather, they appeared to reinforce creative involvement, as evidenced by spontaneous repetition and active refinement of melodic details. At the conclusion of the activity, the participant described a sense of ease and expressed high satisfaction with the completed musical work. These observations indicate a positive immediate emotional response to the music-based re-creative activity.

5. Results and Discussion

5.1. Quantitative Analysis of Emotion-Management Outcomes

Across the emotion-rating scale, physiological indicators, and qualitative evaluation, the song re-creation activity was associated with improvement in emotional state. Prior to the activity, the participant reported elevated emotional tension, with a self-rated tension score of 8 out of 10, a heart rate of 95 beats per minute, a respiratory rate of 24 breaths per minute, and a skin conductance value of 2.8 μ S, indicating heightened physiological arousal. Following the single 60-minute session, all measured indicators showed improvement: the tension score decreased to 5, a 37.5% reduction; heart rate decreased to 78 beats per minute; respiratory rate decreased to 16 breaths per minute; and skin conductance decreased to 1.9 μ S (As shown in Table 3).

Table 3. Comparison of Emotional and Physiological Indicators Before and After the Song Re-creation Intervention

Measure	Pre-intervention	Post-intervention	Change	Improvement rate (%)
Anxiety score	8.0	5.0	-3.0	37.5
Heart rate (bpm)	95	78	-17	17.9
Respiratory rate (breaths/min)	24	16	-8	33.3
Skin conductance (μ S)	2.8	1.9	-0.9	32.1
Subjective comfort (score)	3.2	7.1	+3.9	121.9

The quantitative data suggest that song re-creation may operate through both emotional externalization and physiological modulation. By linking the musical metaphor of “loving but being unable to attain” with the participant’s academic tension related to “striving but being unable to attain,” the participant was able to represent emotional experience indirectly rather than confronting it solely through direct verbal expression, potentially reducing defensive responses. Qualitative interview data further indicated

that the sense of agency experienced during lyric modification supported the participant's perceived capacity for self-directed action. In particular, transforming the original line into "I can never settle down to review" gave an abstract tense state a concrete expressive form and may have facilitated cognitive reframing (As shown in Figure 1).

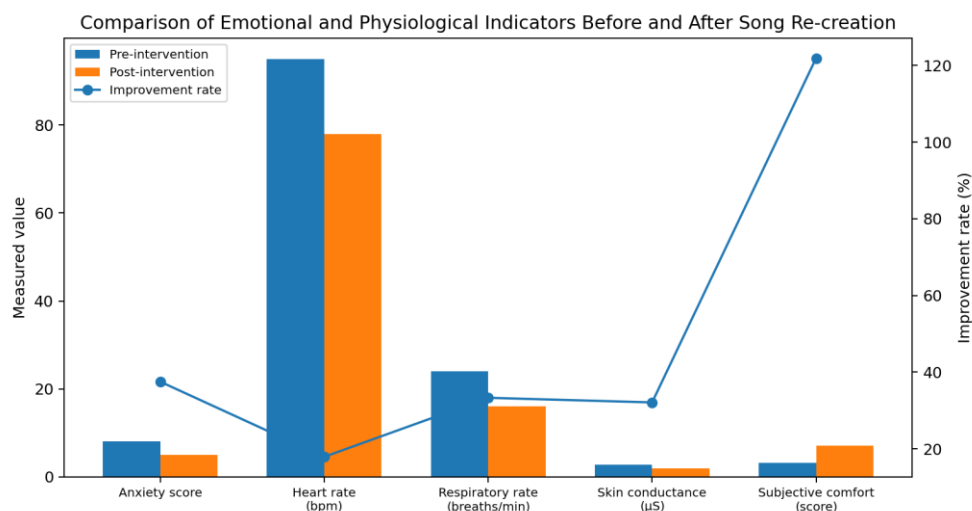


Figure 1. Emotional and Physiological Indicators Before and After the Song Re-Creation Intervention.

5.2. Evaluation of the Effectiveness of Song Re-Creation

The song re-creation technique demonstrated an immediate association with enhanced emotional processing across multiple evaluation criteria. During lyric writing, the participant formed a metaphorical link between her emotional experience and the thematic material of the original song. Rephrasing the original line as "I can never settle down to review" served both to externalize internal feelings and to foster a revised understanding of her emotional state. This highlights a key benefit of song re-creation: artistic transformation may support a more reflective and structured perspective on personal emotions.

Adapting the melody further supported emotional processing. By modifying tempo and pitch in alignment with her personal expressive goals, the participant differentiated and conveyed distinct emotional qualities more effectively. Agency over musical elements also appeared to reinforce her sense of personal agency in managing emotional responses. Physiologically, heart rate decreased from 95 to 78 beats per minute, and the self-reported emotional intensity rating declined from 8 to 5, indicating a measurable response following the single-session activity. The individualized design of the technique likely contributed to its impact. Enabling the participant to guide both content and creative approach aligned with foundational psychological needs for competence and volition, shifting her role from passive observer to engaged co-creator—a meaningful factor in strengthening emotional processing capacity.

5.3. Self-Evaluation Feedback and Recommendations for Optimization

Self-evaluation of the activity indicates that the protocol contributed to reduced emotional tension, though technical execution and long-term continuity could be enhanced. The self-reported emotional tension score decreased from 8 before the activity to 5 afterward, and resting heart rate declined from 95 to 78 beats per minute, reflecting improvement in both subjective experience and physiological response. Subjectively, the participant described a pronounced sense of emotional articulation when revising the original lyric to "I can never settle down to review," as internalized emotional strain was given verbal form and released—a process aligned with principles of expressive release. Although melodic adaptation required iterative rhythmic adjustments, the final

personalized version strengthened emotional connection and highlighted how perceived competence may support adaptive emotional responses.

Based on implementation experience and participant input, several enhancements are proposed. Technically, lyric revision could follow a structured framework—such as identifying the emotion, exploring contributing factors, and formulating constructive responses—to improve clarity and efficiency [11]. Melodic adaptation might integrate accessible music-guidance tools to lower prerequisites for musical background. For continuity, the single-session format could evolve into a phased sequence—comprising initial creation, reinforcement of outcomes, and skill application—with daily mood reflection supporting sustained practice. Given shared developmental experiences among adolescent students, a curated collection of original songs addressing common themes—including academic demands, peer interactions, and career preparation—could broaden applicability and accessibility.

6. Conclusions and Future Directions

6.1. Conclusions

This single-case action research study demonstrated the potential value of song re-creation within re-creative music therapy for supporting emotional self-management, particularly in relation to academic stress in an adolescent student. The structured musical activity based on *A Love Before Time* achieved the stated short-term objective: the participant's self-reported stress rating decreased from 8 to 5, and her heart rate decreased from 95 to 78 beats per minute. Both subjective and physiological changes were favorable. Through rewriting lyrics and adapting the melody, the participant was able not only to articulate internal experiences of stress but also to practice concrete self-regulatory strategies such as paced breathing. These findings suggest that song re-creation may support individuals in reframing emotional experiences and building capacity for active, adaptive responses.

Future research could focus on increasing sample size and refining procedural consistency. Recent trends indicate growth in the number of certified music therapists and expanding clinical demand, creating conditions favorable to broader application of re-creative music therapy. Future studies could therefore compare multiple cases, examine whether musical background and cultural preferences influence responses to song re-creation, and develop standardized criteria for song selection and adaptation. Objective physiological indicators such as electroencephalography and cortisol levels could also be incorporated to strengthen methodological rigor in assessing emotional states and to support applications in educational psychology and clinical rehabilitation.

6.2. Limitations and Directions for Future Research

Because this study used a single-case action research design, its generalizability is limited, and individual characteristics may have influenced the findings. The persistence of the observed effects remains uncertain. A single 60-minute session is too brief to determine whether song re-creation supports sustained emotion-related outcomes. In addition, the absence of a comparison condition precludes definitive attribution of changes to the activity itself, as placebo effects, spontaneous shifts, or other confounding influences cannot be ruled out. Assessment relied primarily on self-reported rating scales, with minimal incorporation of objective physiological indicators.

Future research should expand the sample size and include participants across diverse age groups and cultural contexts. Multicenter randomized designs would strengthen external validity. Follow-up assessments should extend over three to six months and occur at multiple intervals to better characterize the trajectory and stability of observed outcomes. Further inquiry into the underlying processes associated with song re-creation is also warranted. Neuroimaging approaches could help identify patterns of neural engagement during musical creation, thereby supporting a more robust theoretical understanding of how such creative musical activities relate to emotional experience.

References

1. K. E. Bruscia, *Improvitational Models of Music Therapy*. Springfield, IL: Charles C Thomas, Publisher, 1987.
2. B. Leonard, "Songwriting as self-care—a burnout prevention tool for mental health professionals: Development of a method," 2019.
3. S. Koelsch, "Brain correlates of music-evoked emotions," *Nature Reviews Neuroscience*, vol. 15, no. 3, pp. 170–180, 2014.
4. D. Halprin, *The Expressive Body in Life, Art, and Therapy: Working with Movement, Metaphor and Meaning*. London, U.K.: Jessica Kingsley Publishers, 2002.
5. R. M. Ryan and E. L. Deci, "Self-determination theory: Basic psychological needs in motivation, development, and wellness," *Rajagiri Management Journal*, vol. 15, no. 1, pp. 88–90, 2021.
6. M. J. Holtzclaw, *The Gestalt Approach and Eye Witness to Therapy*, 1975.
7. K. S. Moore, "A systematic review on the neural effects of music on emotion regulation: Implications for music therapy practice," *Journal of Music Therapy*, vol. 50, no. 3, pp. 198–242, 2013.
8. S. Gebhardt et al., "The effects of music therapy on the interaction of the self and emotions—An interim analysis," *Complementary Therapies in Medicine*, vol. 41, pp. 61–66, 2018.
9. Y. Feng and M. Wang, "Effect of music therapy on emotional resilience, well-being, and employability: A quantitative investigation of mediation and moderation," *BMC Psychology*, vol. 13, no. 1, p. 47, 2025.
10. M. Zhang et al., "Effect of group impromptu music therapy on emotional regulation and depressive symptoms of college students: A randomized controlled study," *Frontiers in Psychology*, vol. 13, p. 851526, 2022.
11. M. Marik and T. Stegemann, "Introducing a new model of emotion dysregulation with implications for everyday use of music and music therapy," *Musicae Scientiae*, vol. 20, no. 1, pp. 53–67, 2016.
12. S. Uhlig, E. Jansen, and E. Scherder, "'Being a bully isn't very cool...': Rap & Sing Music Therapy for enhanced emotional self-regulation in an adolescent school setting—a randomized controlled trial," *Psychology of Music*, vol. 46, no. 4, pp. 568–587, 2018.
13. B. N. Ezegbe et al., "Effect of music therapy combined with cognitive restructuring therapy on emotional distress in a sample of Nigerian married couples," *Medicine*, vol. 97, no. 34, p. e11637, 2018.
14. L. J. Mercier et al., "Effects of music therapy on mood, pain, and satisfaction in the neurologic inpatient setting," *Disability and Rehabilitation*, vol. 45, no. 18, pp. 2964–2975, 2023.

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