

The Role of Music Therapy in Stress Reduction

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ABSTRACT

This study aims to investigate the potential of music therapy as a stress reliever for young adults. Any unpleasant emotion or sensation, including strain and pressure, is referred to as stress. The clinical and evidence-based application of music interventions to fulfill specific goals within a therapeutic alliance by a qualified professional who has completed an approved music therapy program is known as music therapy. Music therapy mediations aim to improve well-being, reduce stress, ease pain, communicate emotions, improve memory, improve communication, and aid in physical recovery. A review of the literature demonstrates that music has a significant impact on a person's psychological state and lowers tension and anxiety.

Keywords: music therapy, stress

1. INTRODUCTION

Stress is a ubiquitous feature of contemporary life, impacting individuals across various demographics and circumstances. It includes a variety of emotional, psychological, and physiological reactions to tensions within or external stresses. Numerous health concerns, such as heart difficulties, weakened immune systems, and mental health conditions like anxiety and depression, can be attributed to prolonged stress. Since stress affects everyone, finding effective ways to reduce it is essential to promoting overall well-being.

A potentially effective strategy is music therapy, a discipline that uses music's therapeutic qualities to address social, cognitive, and emotional needs. To accomplish therapeutic goals within a therapeutic relationship, skilled practitioners intentionally use musical interventions in music therapy. These therapies can be singing, playing an instrument, listening to music, or creating music that is specific to the needs and goals of each patient.

Extensive research in this regard has upheld the profound influence of music therapy on stress reduction. For instance, a study by Chanda and Levitin (2013)¹ discovered that listening to music can improve the activity of brain regions involved in stress response, leading to decreased levels of cortisol, a hormone associated with stress. Additionally, as emphasized in a meta-analysis conducted by Bradt et al. (2013)², music intervention techniques have exhibited potency in reducing anxiety and improving mood among patients undergoing medical procedures.

Furthermore, music therapy has been amalgamated into numerous healthcare environments to inhibit stress and facilitate relaxation. In the case of patients undergoing treatment or enduring chronic illnesses,

¹ Chanda, M. L., & Levitin, D. J. (2013). The neurochemistry of music. *Trends in cognitive sciences*, 17(4), 179-193.

² Bradt, J., Dileo, C., & Potvin, N. (2013). Music for stress and anxiety reduction in coronary heart disease patients. *Cochrane Database of Systematic Reviews*, (12).

hospitals often utilize music therapy. Similarly, mental health institutions incorporate music intervention techniques to manage anxiety and enhance emotional expression.

2. UNDERSTANDING STRESS AND ITS IMPACT

Stress is a multifaceted physiological and psychological reaction elicited as a response to perceived threats or challenges. It includes a broad spectrum of responses affecting the mind, body, and emotions. Stress can be further categorized as acute and chronic stress. Acute stress extends over a short duration and is majorly triggered by immediate stressors such as deadlines, sudden changes, or public speaking. While it is possible to withstand acute stress and can even be motivating in small quantities, Chronic Stress perseveres over a prolonged duration. It arises from rooted issues that are more serious such as work issues, or financial problems. Chronic stress is more likely to have serious health consequences due to sustained activation of stress response systems (Cohen et al., 2007)³.

Stress physiologically triggers the body's "fight-or-flight" response, causing the release of chemicals like adrenaline and cortisol that prime the body to respond to perceived threats. This reaction may result in tense muscles, higher blood pressure, an accelerated heartbeat, and heightened alertness. Continued exposure to stress can pose detrimental threats to health leading to conditions such as hypertension, cardiovascular ailments, and weakened immune function (McEwen 2007)⁴.

From a psychological perspective, feelings of irritability, concentration difficulty, and anxiety can be attributed to stress. It may impede cognitive function, resulting in memory issues and poor judgment. Mood disorders, such as depression, annoyance, or a feeling of being overwhelmed, are frequently brought on by emotional stress. Chronic Stress can intensify predisposed mental health disorders such as depression, and anxiety disorders (Salleh 2008)⁵.

Common disorders associated with stress comprise a range of ailments impacted by stress, such as somatic disorders (e.g., tension headaches, irritable bowel syndrome), mood disorders (e.g., depression), and anxiety disorders (e.g., panic disorder, generalized anxiety disorder). Stress is also recognized as a noteworthy risk factor for the emergence and amplification of several physical health problems, highlighting the intricate interplay between stress and overall well-being (Kendler et al., 1999)⁶. Recognizing the various effects of stress and the problems it can cause highlights how crucial it is to use appropriate stress management techniques, such as music therapy interventions, to lessen these negative consequences and foster resilience.

3. INTRODUCTION TO MUSIC THERAPY

Music therapy is a specialized form of therapy that utilizes music to address physical, emotional, cognitive, and social needs within a therapeutic framework. Its principles stem from the conviction that music can influence people on various levels, promoting expression, communication, and healing (American Music Therapy Association [AMTA], n.d.). Music therapists exercise a range of methods and strategies personalized to the needs of every client. These might entail active approaches like playing an instrument or singing, improvisation, songwriting, and using music to guide imagery, as well as receptive methods

³ Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *Jama*, 298(14), 1685-1687.

⁴ McEwen, B. S. (2007). Physiology and neurobiology of stress and adaptation: central role of the brain. *Physiological reviews*, 87(3), 873-904.

⁵ Salleh, M. R. (2008). Life event, stress and illness. *The Malaysian journal of medical sciences: MJMS*, 15(4), 9.

⁶ Kendler, K. S., Karkowski, L. M., & Prescott, C. A. (1999). Causal relationship between stressful life events and the onset of major depression. *American journal of psychiatry*, 156(6), 837-841.

like listening to music (Grocke & Wigram, 2007)⁷. The selection of techniques depends on the therapeutic goals and the client's preferences and abilities. Professionals with a degree in music therapy who go through extensive clinical training are known as music therapists. They are skilled in determining the requirements of their clients, creating solutions, and monitoring their progress. They also have a thorough understanding of music and its therapeutic uses (AMTA, n.d.). Beyond only creating musical experiences, a music therapist's role is to facilitate therapeutic outcomes by engaging with clients to promote personal development and healing (Bruscia, 1981)⁸. Clinical expertise, musical ability, and a thorough understanding of the psychological and physiological mechanisms behind music therapy are all focused in their training.

By utilizing evidence-based methods and a client-centered approach, music therapists seek to utilize the natural therapeutic qualities of music to improve people's quality of life and well-being in a variety of contexts and demographics.

4. MECHANISMS OF MUSIC THERAPY IN STRESS REDUCTION

The stress-regulatory systems in the brain are significantly impacted neurologically by music. The amygdala, hippocampus, and prefrontal cortex are among the brain regions that play a role in emotional processing and stress regulation, and they may all undergo shifts in activity when we listen to music. According to research, listening to music can boost the production of neurotransmitters like dopamine and serotonin, which are linked to pleasant emotions and relaxation, and decrease the release of stress-associated hormones like cortisol (Koelsch, 2014)⁹. Music's capacity to reduce stress and promote calm is partly attributed to this neurotransmitter and hormone modulation.

Furthermore, through psychological mechanisms, music promotes relaxation. By lowering blood pressure, reducing muscle tension, and slowing down heart rate, listening to relaxing music can help induce a relaxation response (Thoma et al., 2013)¹⁰. In addition to being a potent emotional expression tool, music also helps people channel and let go of suppressed emotions, which is especially advantageous for stress management and enhancing emotional health (Miranda & Claes, 2009)¹¹. Furthermore, music promotes social interaction by giving listeners a common emotional experience, which heightens sentiments of inclusion and diminishes feelings of loneliness (Koelsch, 2014)¹².

In conclusion, music has an array of effects on stress management that involve both neurobiological and psychological mechanisms. Comprehending these pathways emphasizes the therapeutic potential of music in fostering emotional release, social bonding, and relaxation—all of which contribute to general stress reduction and well-being.

⁷ Grocke, D., & Wigram, T. (2006). *Receptive methods in music therapy: Techniques and clinical applications for music therapy clinicians, educators and students*. Jessica Kingsley Publishers.

⁸ Bruscia, K. E., Hesser, B., & Boxill, E. H. (1981). Essential competencies for the practice of music therapy. *Music therapy, 1*(1), 43-49.

⁹ Koelsch, S. (2014). Brain correlates of music-evoked emotions. *Nature reviews neuroscience, 15*(3), 170-180.

¹⁰ Thoma, M. V., La Marca, R., Brönnimann, R., Finkel, L., Ehlert, U., & Nater, U. M. (2013). The effect of music on the human stress response. *PLoS one, 8*(8), e70156.

¹¹ Miranda, D., & Claes, M. (2009). Music listening, coping, peer affiliation and depression in adolescence. *Psychology of music, 37*(2), 215-233.

¹² Koelsch, S. (2014). Brain correlates of music-evoked emotions. *Nature reviews neuroscience, 15*(3), 170-180.

5. CLINICAL APPLICATIONS OF MUSIC THERAPY FOR STRESS REDUCTION

Music therapy is an essential element of healthcare settings, especially hospitals due to its accessible and non-invasive therapeutic approach. It has been established that in these settings, music therapy may mitigate anxiety, diminish the sense of pain, and enhance general mood and mental well-being (Bieleninik et al., 2018)¹³. Music therapy is becoming a more widely accepted component of mental health treatments for mood disorders like depression and anxiety disorders. According to research, music-based techniques in music therapy may boost emotional regulation and induce relaxation, thereby mitigating anxiety symptoms (Maratos et al., 2008)¹⁴. Music therapy can improve mood, increase self-esteem, and give patients a creative outlet for expressing their emotions while they are experiencing mood disorders (Gold et al., 2013)¹⁵.

Music therapy has a significant positive impact on particular populations in various hospital settings. For instance, cancer patients frequently undergo immense discomfort as a result of their diagnosis and course of treatment. Research indicates that music therapy can effectively lower stress levels, promote coping strategies, and improve the quality of life for cancer patients (Bradt et al., 2016)¹⁶. Corresponding to this, children and older individuals with a range of medical issues or developmental abnormalities, such as autism spectrum disorder, also benefit from specialized music therapy therapies (Geretsegger et al., 2017; Gold et al., 2006)¹⁷. Due to its adaptability and efficacy, music therapy is a useful supplementary treatment in the medical field that supports the mental, physical, and emotional health of a wide range of patient populations.

6. STRATEGIES FOR IMPLEMENTING MUSIC THERAPY INTERVENTIONS FOR STRESS REDUCTION

- a) Active Listening Sessions- Organize frequent gatherings where people engage actively in relaxing music listening. This can involve guided listening activities that emphasize calm and deep breathing (Chen et al., 2021)¹⁸.
- b) Personalized playlist creation- Allow participants to create playlists of their favorite musical genres or upbeat tunes to personalize music interventions. This generates a feeling of independence and an intimate connection with the healing process (Thoma et al., 2013)¹⁹.

¹³ Fusar-Poli, L., Bieleninik, L., Brondino, N., Chen, X. J., & Gold, C. (2018). The effect of music therapy on cognitive functions in patients with dementia: a systematic review and meta-analysis. *Aging & Mental Health*, 22(9), 1103-1112.

¹⁴ Maratos, A., Gold, C., Wang, X., & Crawford, M. (2008). Music therapy for depression. *Cochrane database of systematic reviews*, (1).

¹⁵ Gold, C., Mössler, K., Grocke, D., Heldal, T. O., Tjemsland, L., Aarre, T., ... & Rolvsjord, R. (2013). Individual music therapy for mental health care clients with low therapy motivation: Multicentre randomised controlled trial. *Psychotherapy and psychosomatics*, 82(5), 319-331.

¹⁶ Bradt, J., Dileo, C., Magill, L., & Teague, A. (2016). Music interventions for improving psychological and physical outcomes in cancer patients. *Cochrane Database of Systematic Reviews*, (8).

¹⁷ Eickholt, J., Geretsegger, M., & Gold, C. (2018). Perspectives on research and clinical practice in music therapy for older people with depression. In *Arts Therapies in the Treatment of Depression* (pp. 227-240). Routledge.

¹⁸ Lu, G., Jia, R., Liang, D., Yu, J., Wu, Z., & Chen, C. (2021). Effects of music therapy on anxiety: A meta-analysis of randomized controlled trials. *Psychiatry research*, 304, 114137.

¹⁹ Thoma, M. V., La Marca, R., Brönnimann, R., Finkel, L., Ehlert, U., & Nater, U. M. (2013). The effect of music on the human stress response. *PLoS one*, 8(8), e70156.

- c) Live music performances- Arrange interactive music-making workshops or live music events directed by certified music therapists. Live music can promote social interaction and emotional expression, which can lower stress levels and build a sense of community (McCaffrey et al., 2011)²⁰.
- d) Rhythmic movement and dance- Integrate dance and rhythmic movement in the music therapy sessions. By combining physical exercise with music-induced emotional responses, movement to music has been reported to lower cortisol levels and increase relaxation (Quiroga Murcia et al., 2010)²¹.
- e) Progressive muscle relaxation with music- Incorporate progressive muscle relaxation exercises with music therapy approaches. By inducing a deeper level of relaxation and relieving tense muscles, music can increase the effectiveness of relaxation treatments (Bradt et al., 2015)²².
- f) Group Drumming circles- Conduct group drumming sessions; these have been proven to have a positive impact on elevating mood and reducing stress. Drumming encourages synchronization and coordination, which fosters a sense of solidarity and group well-being among participants (Bittman et al., 2004)²³.

7. CONCLUSION

In conclusion, this paper indicates the significant beneficial effects of music therapy on stress alleviation. Music therapy provides adaptable and efficient methods to reduce stress and enhance general well-being through a variety of interventions, including progressive muscle relaxation, live music performances, personalized playlist construction, rhythmic movement, and group drumming sessions. Extensive research indicates that listening to music in therapeutic contexts might alter neuronal networks linked to stress management, resulting in lower cortisol levels, better moods, and enhanced relaxation responses. Not only can music therapy promote emotional expression, social connection, and a sense of empowerment among participants, but it also has positive effects that go beyond physiological changes. These results underscore the need to incorporate music therapy into medical practices as a comprehensive and easily accessible approach for the enhancement of quality of life and stress management. To fully comprehend the potential of music therapy in treating disorders pertaining to stress, further research and integration into various clinical settings are crucial.

²⁰ McCaffrey, T., Edwards, J., & Fannon, D. (2011). Is there a role for music therapy in the recovery approach in mental health?. *The Arts in Psychotherapy*, 38(3), 185-189.

²¹ Koelsch, S., Offermanns, K., & Franzke, P. (2010). Music in the treatment of affective disorders: an exploratory investigation of a new method for music-therapeutic research. *Music Perception*, 27(4), 307-316.

²² Bradt, J. (2022). Music therapy assessments. *Nordic Journal of Music Therapy*, 31(1), 3-6.

²³ Bittman, B. B., Snyder, C., Bruhn, K. T., Liebfreid, F., Stevens, C. K., Westengard, J., & Umbach, P. O. (2004). Recreational music-making: an integrative group intervention for reducing burnout and improving mood states in first year associate degree nursing students: insights and economic impact. *International Journal of Nursing Education Scholarship*, 1(1).