


## EDITORIAL

### Let Us Talk About Music and Its Therapeutic Power

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The history of music is as ancient as humanity itself. In ancient Greece, philosophers such as Plato and Aristotle described the power of music to nurture the soul, while Hippocrates, the father of medicine, used music as a therapeutic tool to treat various ailments.<sup>(1)</sup> Music therapy—historically referred to as *musicotherapy*—became formally recognized as a therapeutic profession in 1950, with the establishment of the National Association for Music Therapy in the United States. Although music had been used for healing across cultures for centuries, the positive outcomes observed in soldiers recovering from trauma after the two World Wars emphasized the need for trained professionals and standardized practice.<sup>(2)</sup> During the second half of the 20<sup>th</sup> century, university training programs, certification standards, and international organizations further strengthened the profession. In the United Kingdom, the Association of Music Therapy was founded in 1958, and in 1968 Latin America held its first Music Therapy Congress, reflecting the global expansion of the field.

Music therapy is now defined as the clinical and evidence-based use of music to accomplish individualized therapeutic goals. According to Bruscia, music therapy is a constructive process in which the therapist uses musical experiences to support improvements in physical, emotional, cognitive, or social well-being.<sup>(1)</sup> It is practiced exclusively by trained and certified music therapists, who integrate musical elements intentionally—through listening, singing, instrument playing, songwriting, movement, or guided imagery—to promote therapeutic processes.

Music therapy can be understood as a dynamic interaction between three essential components: the individual seeking therapy, the therapist, and the music itself. When these elements interact purposefully, a “musical reaction” occurs, generating positive and measurable changes. Physiologically,

music can lower cortisol levels, regulate heart rate and breathing, stimulate neuroplasticity, enhance emotional expression, support non-verbal communication, and increase engagement and motivation.<sup>(3,4)</sup> In individuals with neurological conditions, music can bypass damaged neural pathways and activate alternative routes; for this reason, it is widely used in stroke rehabilitation, dementia care, and autism support.<sup>(5)</sup>

Advances in neuroscience have deepened our understanding of how music interacts with the central nervous system. Techniques such as Magnetic Resonance Imaging (MRI), functional Magnetic Resonance Imaging (fMRI), Electroencephalography (EEG) and Brainstem Evoked Response Audiometry/Auditory Brainstem Response (BERA) have demonstrated that music activates multiple brain regions simultaneously, including the Broca’s and Wernicke’s areas (language), the limbic system and amygdala (emotion), the motor cortex and cerebellum (movement), the hippocampus (memory), and the reward system, which triggers dopamine release.<sup>(6)</sup> This widespread brain activation explains why music can simultaneously influence cognition, emotion, behavior, and physiological regulation. Research consistently shows positive outcomes from music therapy in individuals with Alzheimer’s disease, depressive disorders, Parkinson’s disease, autism spectrum disorders, and other neurological or developmental conditions.<sup>(5,7)</sup>

Music therapy can be delivered individually or in groups, and it is effective across life stages—including children, adolescents, adults, and older adults. Music therapy is increasingly recognized as an essential tool in maternity, pediatric, and adolescent healthcare because it supports physical, emotional, and developmental well-being in a non-invasive manner.

In the prenatal period, singing strengthens maternal–

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fetal bonding and stimulates fetal auditory development. In maternity care, music can reduce anxiety and stress by lowering cortisol levels and regulating breathing and heart rate—thus benefitting both mother and baby.<sup>(3)</sup> In fact, music reduces the perception of pain and enhances relaxation during labor, acting as a complementary form of support. In the postpartum period, music therapy supports mood stabilization and reduces symptoms of anxiety and depression, promoting emotional regulation and improved sleep. For newborns, especially premature infants, music therapy has been shown to stabilize vital signs, improve feeding, enhance sleep, and shorten hospital stays.<sup>(8)</sup> In neonatal intensive care units, parental singing strengthens attachment and supports early communication.

For children, music therapy effectively manages anxiety during medical procedures by reducing fear, increasing feelings of safety, and activating reward pathways that reduce the perception of pain.<sup>(9)</sup> In addition, it supports emotional expression, especially in children who struggle to verbalize their feelings. In presence of developmental delays, autism, or sensory processing challenges, music therapy enhances speech and language development, motor coordination, cognitive skills, and social interaction.

Adolescents often form deep emotional connections with music, making music therapy particularly effective for supporting mental health. It can help address anxiety, depression, emotional dysregulation, identity struggles, and trauma by offering a safe and expressive medium that may feel more accessible than traditional talk therapy.

Finally, music therapy also contributes to a healing hospital environment by reducing noise-related stress and promoting calmness for patients, families, and staff alike. Family-centered sessions help parents and caregivers cope with hospitalization and strengthen family bonds.

## CONCLUSION

Music therapy offers meaningful benefits in maternity, pediatric, and adolescent healthcare, but its effectiveness depends on using it intentionally and within the appropriate clinical context. While music can support emotional regulation, reduce anxiety and pain, and promote developmental and relational outcomes, these benefits occur when interventions are delivered by trained professionals who understand the specific needs, medical conditions, and developmental stages of each patient. Therefore, music therapy should not be applied as a one-size-fits-all approach but should be integrated thoughtfully into the broader healthcare plan instead, ensuring that each intervention is evidence-based, patient-centered, and aligned with the clinical goals. When used in context, music therapy becomes a powerful complementary intervention that enhances holistic care and contributes to a supportive, healing environment for mothers, infants, children, and adolescents.

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