



## MUSIC THERAPY AND AUTISM

Music therapists assess, treat, and discharge based on the recommended plan of care for patients on the autism spectrum in accordance with standards of practice and evidence based techniques. Music therapy interventions focus on enhancing social, communicative, motor, sensory, emotional, cognitive functioning in individuals with ASD. Music therapists work in partnership with clients, families, and interdisciplinary teams.

### Impact of the work:

- Research supports connections between speech and singing, rhythm and motor behavior, memory for academic material, and overall ability of musical elements to optimize a patient's ability to learn, interact and be successful in addressing areas that are individually challenging. The processing of music overlaps with areas of the brain that are involved in non-musical functions and skills. Therefore, one of the purposes of music therapy for persons with autism is to provide the individual with an initial assist using melodic and rhythmic strategies, followed by fading of musical cues to aid in generalization and transfer of skills to other environments. Music is processed throughout the cortex, sub-cortex and cerebellum, supporting the numerous benefits of using it in treatment of individuals on the autism spectrum. Researchers have demonstrated cortical changes in persons with ASD who engage in music therapy treatment over time targeting appropriate therapeutic goals to impact functional change.
- Benefits of music therapy treatment with ASD include but aren't limited to increased attention, decreased self-stimulation, improved cognitive functioning, increased socialization and successful and safe self-expression. As well as improved behavior, enhanced auditory processing, decreased agitation, improved communication, enhanced sensory-motor skills and improved emotional regulation.
- Music therapy integrates a variety of ASD-specific evidence-based strategies (e.g., prompting, reinforcement, picture schedule) and music therapy techniques (e.g., singing/ vocalization, instrument play, movement/ dance, musical improvisation, songwriting/ composition, listening to music, or computer-based music activities). These strategies and techniques support clients in practicing identified and targeted functional skills. Music therapy sessions provide familiarity, consistency, structure, and predictability –characteristics that support the learning style of individuals with ASD. Music therapists take data on treatment goals and conduct ongoing evaluation of progress towards the achievement of goals and generalization (AMTA, 2015).

### Research Articles:

1. Gooding, L. (2011). The effect of a music therapy social skills training program on improving social competence in children and adolescents with social skills deficits. *Journal of Music Therapy*, 48(4) , 440-62.
2. Lim, H. A. (2010). Effects of "Developmental Speech and Language Training through Music" on speech production in children with autism spectrum disorders. *J. Music Ther . 47, 2–26.*
3. Hardy M. W. and LaGasse A. B. (2013). Rhythm, movement, and autism: using rhythmic rehabilitation research as a model for autism. *Front. Integr. Neurosci . 7 :19. doi: 10.3389/fnint.2013.00019*
4. Brownell, M. (2002). Musically adapted social stories to modify behaviors in students with autism: four case studies. *J. Music Ther . 39, 117–144.*
5. Kern, P., and Aldridge, D. (2006). Using embedded music therapy interventions to support outdoor play of young children with autism in an inclusive community-based child care program. *J. Music Ther . 43, 270–294.*
6. Kim, J., Wigram, T., and Gold, C. (2008). The effects of improvisational music therapy on joint attention behaviors in autistic children: a randomized control trial. *J. Autism Dev. Disord . 38, 1758–1766.*
7. Lai, G., Pantazatos, S., Schneider, H., and Hirsch, J. (2012). Neural systems for speech and song in autism. *Brain 135(Pt 3), 961–975.*