 **Music Therapy:**

Neurological

Rehabilitation

Music Therapy is an effective mode of therapy for neurological conditions such as Parkinson’s disease, Cerebral Palsy, and Traumatic Brain Injury. Melody & Rhythm—the elements of music—stimulate both sides of the brain at one time. Certified and licensed music therapists utilize these elements of music to achieve therapeutic goals.

**Music Therapy Goals**

Studies in both music therapy and neuroscience have shown the following positive effects of using music in a therapeutic setting for treatment of Parkinson’s Disease, Cerebral Palsy, and Traumatic Brain Injury.

* Stimulate production of dopamine and serotonin
* Improvement in initiating movements
* Improvement in organization of consecutive movements
* Improvement in even gait
* Improvement in balance and coordination
* Improvement in breath control
* Improvement in speech articulation & tonal quality
* Increase in fine motor abilities such as bilateral coordination, palmar grasp, and finger isolation
* Increase in memory recall and other cognitive abilities
* Improvement in treatment motivation and mood. (Dobson)

**Music Therapy techniques**

Music therapists use rhythm to provide structure, to energize the therapy setting, and to cue movements or speech. The following are some music therapy techniques used to address the previous listed goals:

* Therapeutic Instrument Play—use of selected instrument and play technique to stimulate and exercise functional movement patterns to facilitate range of motion, finger dexterity, and coordination. Music therapists position instruments around individual in order to practice desired movement (ex. placing hand drum to the side of the body to facilitate crossing of midline). Frequently used instruments include hand drums, piano, and guitar
* Rhythmic Auditory Stimulation (RAS)—use of auditory rhythmic patterns to facilitate and coordinate body movements that are inherently rhythmic, especially gait. RAS is used to entrain movements to be stable and organized.
* Therapeutic Singing—use of pitches phrases to facilitate appropriate vocal range, breath support, speech production, prosody of speech, and vocal inflection. Singing/Chanting is often paired with a movement to facilitate not only vocal/speech goals, but also recall of fine and gross motor movements.

(Thaut, 2005)

**Music Therapy Co-treating**

In coordination with physical therapy, music therapists provide many benefits including:

* Structured or nonverbal cueing, especially for patients who may have difficulty executing or understanding verbal instructions.
* Rhythmic and melodic patterns to increase facilitation of coordination and planning of exercise or movement given by the PT.
* Increase of sustained attention and participation, especially for patients who have difficulty staying on task.
* Use of preferred music to motivate patient, especially when working on non-preferred movement or endurance

(Thompson, 2013)

**Music Therapy Groups:**

In addition to the individualized goals listed above, music therapy is often very effective in a group setting. Making music within a group provides space for self-expression, group cooperation, and creativity.

Music therapists provide the tools, instruction, and structure to facilitate the creation of musical products for patients within the group. Music therapy groups have been shown to increase positive affect and self esteem through the self-actualization and creative engagement with interpersonal relationships. Examples of music therapy groups include drumming ensembles, Orff ensembles, bells choirs, and multi-instrument groups.

**Music Therapy Treatment**

Music therapists conduct an initial detailed evaluation that assesses the following areas of the patient:

* Gross Motor Skills
* Fine Motor Skills
* Oral Motor Skills
* Cognitive Skills
* Social Skills
* Sensory Processing
* Emotional Regulation
* Receptive Communication
* Expressive Communication
* Musicality

Based on the initial evaluation, the therapist creates functional goals 6-month goals in a Plan of Care. The MT addresses these goals through intentional music therapy interventions. The therapist keeps therapy notes after each session, and a reassessment is conducted every 6 months to measure progress and ensure continued growth.

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