

International Handbook of Occupational Therapy Interventions

Chapter 47

Medical Music Therapy: Evidence-Based Principles and Practices

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Music therapy offers many possibilities for clients who are experiencing a range of health problems. In the words of a client, “Music therapy helps me to feel like a whole person again.”

Abstract Because of its flexibility, versatility, and utility with a wide range of clients and clinical issues, as well as its acceptability by clients and the documentation of its effectiveness, music therapy will undoubtedly continue to grow as a viable approach in all facets of health care. As has been realized throughout the ages, music is an indispensable part of the human experience and an essential component to achieving quality of life.

Keywords Behavioral discipline • Complementary therapy • Music therapy • Psychotherapy • Sensory art therapies

Definition

Music is a multidimensional phenomenon, capable of addressing various human domains simultaneously. The American Music Therapy Association (2005) defines music therapy as “the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program.”

In contrast, other music practices in hospitals implemented by medical personnel (e.g., using prerecorded music to enhance mood) or by professional musicians (e.g., using live music for entertainment) do not comprise the necessary components of music therapy (Dileo and Bradt, 2007; Dileo and Reuer, 2007).

Music therapy is always involves the following:

- A credentialed professional music therapist
- A process that includes individualized assessment, intervention, and evaluation
- The use of the range of experiences possible within music
- A relationship between therapist and client that develops through the music

Background

Although the therapeutic properties of music have been acknowledged since the beginning of recorded history, the scientific discipline of music therapy did not emerge until after World War I, when musicians visited veterans' hospitals to perform for military personnel who were experiencing battle-related physical and emotional traumas. The positive and sometimes dramatic responses to music observed among patients led to the hospitals' hiring of musicians and to the need for specialized training for musicians to implement this work. The first university music therapy training program was established in 1944, and the National Association for Music Therapy was created in 1950 (Dileo and Reuer, 2007).

Purpose

Music therapy is used to improve, maintain, remediate, or prevent one or more of the clinical issues in clients, as specified in their needs for habilitation or rehabilitation.

Method

Candidates for the Music Therapy Intervention

Typically, clients are referred to music therapy based on criteria established by the music therapist as well as the facility's expectations of music therapy's contribution to intervention (Magee and Wheeler, 2006).

Settings

Music therapists work both individually and in groups in a wide range of clinical settings with persons who experience various psychological, physical, cognitive, social, financial, or spiritual problems.

The Role of the Music Therapist

Music therapists are trained to systematically effect nonmusical outcomes in all of the human domains (physiologic, psychological, cognitive, social, spiritual, and behavioral).

In the United States music therapists may enter the field at the bachelor's level after completion of a rigorous, standardized curriculum in music and music therapy; the biological, behavioral, and social sciences; and an extended internship and the successful passing of the national board-certification examination (administered by the independent Certification Board for Music Therapy). Master's degrees and a full PhD program in music therapy are available and strongly encouraged (Dileo and Reuer, 2007).

Results

Clinical Application

Music is capable of affecting the various human domains simultaneously. When used by a credentialed music therapist within the context of a trusting, therapeutic relationship, its outcomes may be well documented. Several systematic reviews and meta-analyses show the effect of music therapy among clients with the diagnoses of heart diseases (Bradt and Dileo, (2009), cancer (Dileo et al., 2008), schizophrenia (Gold, et al., 2008a), autism (Gold, et al., 2008b), depression (Maratos, et.al., 2008) or dementia (Vink, et al., 2008) and among clients who is near their end of life (Bradt and Dileo, 2008b) or living with acquired brain damage (Bradt, et al., 2008). Further music therapy is used for anxiety reduction before operation (Dileo and Bradt, 2008) and in mechanically ventilated clients (Dileo, et al., 2008). Evidence of the many potential outcomes of music therapy intervention continues to accumulate in various areas of human functioning. Promising results have been noted for music therapy's effects on physiologic parameters, mood, depression, and pain, as well as in reducing agitation in clients with dementia. Preliminary data on the cost-effectiveness of music therapy interventions indicate decreases in pain medication and in the length of stay in intensive care units.

The Process of Music Therapy

Assessments

The music therapy process begins with a detailed assessment process that identifies the client's needs, musical preferences and relationship to music, medical and social history, ability to communicate, and physical, cognitive, and emotional capabilities (Dileo and Reuer, 2007). This information is collected from the client, the family, the client's records, and standardized measures or specially designed music therapy assessment instruments. In addition, the music therapist may engage the client in music to observe his or her capabilities and responses directly. It is not unusual for the latter assessment strategy to reveal information about the client that cannot be gleaned from other sources.

Goal Setting

Based on assessment results, a decision is made as to whether music therapy may be of potential benefit to the client. If so, specific physical, psychological, cognitive, social, spiritual, or behavioral goals are identified, and music therapy interventions best suited to meet these goals are planned (this may also be done in collaboration with the client's intervention team, where relevant). Evaluation of the client's progress toward the established goals is ongoing throughout intervention and documented in the client's records. A final summary of progress is documented at the termination of music therapy services (Dileo and Reuer, 2007).

Intervention

Music therapy interventions comprise a wide range of possible experiences within music and may be categorized as follows: (1) receptive, (2) creative, or (3) recreative, or a combination of these categories; within these approaches all types, styles, and genres of music may be utilized.

In receptive approaches, the client "receives" music passively by listening or by having music vibrations applied directly to the body ("vibroacoustic therapy") (Wigram and Dileo, 1997). The music used may be pre-composed, specially composed by the client or therapist, or may be created spontaneously by the therapist (e.g., matched to physiologic parameters of the client).

Receptive approaches include, but are not limited to, music listening, song choices, music and imagery, music visualization, music-assisted relaxation, lyric analysis, and music therapy entrainment. Music is selected by the therapist according to its inherent qualities and structural elements along with its intended therapeutic purposes. The client's preference for and familiarity with the music are also factors in its selection; consideration is given to the evocative potential of the music in stimulating memories, associations, and images inconsistent with therapeutic goals (Dileo and Reuer, 2007). When using receptive approaches, the therapist often processes the client's reaction to the music verbally.

In creative approaches, the client improvises or creates music or songs spontaneously using voice or musical instruments, or purposefully composes music or songs alone or with the therapist.

In re-creative approaches, the client performs previously composed music on an instrument, sings pre-composed songs, conducts music, or learns to play an instrument. In combined approaches, music therapy is used in conjunction with non-music therapy approaches, with the assumption that music will enhance the effectiveness of the method used.

Combined approaches may include, for example, music and meditation, music and hypnosis, music and touch/massage, music and movement, and music and other arts experiences. In all music therapy approaches, the client needs no musical skills or previous musical training, as the therapist is able to facilitate the client's engagement in music using specialized methods (Dileo and Reuer, 2007).

The Use of Music Therapy to Address Clinical Goals

For clients with *impaired physical functioning*, active participation in music-making, such as playing instruments, requires purposeful and coordinated movements and may provide specific activation of small and large muscle groups, thereby enhancing strength, functional movement, appropriate body alignment, bilateral coordination, and breath control (Magee and Wheeler, 2006). In addition, auditory rhythmic stimulation may provide for the cuing and structuring of movement and walking (Thaut, 2000).

In a similar manner, listening to client-preferred, sedative music may *affect physiologic parameters*, such as heart rate, blood pressure, and respiration, and there is some evidence of its influence on stress hormones, immune function, and biochemical phenomena (Dileo and Bradt, 2005). The therapist may improvise music to match a physiologic parameter of the client (e.g., respiration rate). Once matched and sustained for a short period, the therapist gradually decreases the pulse of the music to encourage a slowing down of the breath (Dileo and Reuer, 2007).

The therapist may also improvise music according to the specific details of a client's *report of pain* using the process of music therapy entrainment (Dileo and Bradt, 1999). Music may serve as the focal point during a painful procedure, or the therapist and client may chant or sing together to decrease accelerated respiration.

The use of music therapy to *reduce physiologic arousal* is a common practice. Music itself may serve as the relaxation agent, with the client passively listening to music performed live by the therapist or through prerecorded music. Additional relaxation techniques may be combined with the music, including progressive muscle relaxation, autogenic suggestions, breathing techniques, and visual imagery (Dileo and Bradt, 2007; Dileo and Reuer, 2007).

Music therapy may be used to *enhance social and psychological functioning* as well as *quality of life* in a variety of ways. Listening to live or recorded music may improve mood and decrease depression for a range of clients. Playing an instrument or creating an original song may improve self-esteem and provide for an alternate means of expression. Listening to and discussing lyrics of specially selected songs with a music therapist may facilitate self-awareness and personal insight. Improvising music or performing in a group may strengthen connectedness with others and facilitate the acquisition of social skills.

Music therapy may be used to *stimulate cognitive functioning* in clients suffering from a variety of conditions. For example, hearing and singing songs may evoke memories, promote attention to the task at hand, increase orientation to time and place, and enhance abstract thinking (Magee and Wheeler, 2006).

Clients' *spiritual and existential needs* may be supported through music therapy approaches that involve singing hymns, writing songs that provide messages of encouragement and hope, and discussing song lyrics relevant to spiritual issues.

In addition, music therapy may provide comfort to clients and their families by *facilitating relationship completion* and support for the transition (Dileo and Parker, 2005).

Lastly, music therapy may be used to *encourage behavioral changes* in clients, for example, providing the motivation to engage in and comply with intervention. This is attributable to its effects on other aforementioned domains, such as reducing pain, decreasing depression, etc.

Discussion

Music therapists may contribute greatly to the interdisciplinary team because of the range of clinical issues that they may address using this intervention modality. Because of the inherent pleasure and enjoyment associated with music engagement, clients often demonstrate less resistance to music therapy, and client capabilities not obvious in other intervention areas are often observed. This client information is often considered valuable by the intervention team.

Music therapists may serve as consultants to occupational therapists or they may develop ways of combining their areas of expertise to the benefit of the clients they serve. For example, music and occupational therapists may co-design interventions aimed at enhancing a client's fine motor skills using adapted musical instruments.

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