

Music therapy

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*The man that has no music in himself,
Nor is moved with concord of sweet sounds,
Is fit for treasons, stratagems, and spoils;
The motions of his spirit are dull as night,
And his affections dark as Erebus.*

Shakespeare

Music and medicine have been closely associated for centuries. Indeed, Pythagoras believed that if music were used in daily life in a prescribed manner it would make a salutary contribution to one's health, a concept which led him to investigate the physics of sound and to develop the fundamentals of today's tonal system (Munro & Mount, 1978). During medieval times, music was imbued with significant therapeutic properties and used as a mood altering medium, an aid to digestion, an antidote to poison and as a wound healing stimulant. The idea of using a pure sinusoidal tone at a low frequency has been known for centuries, and in primitive cultures instruments and sounds were used to treat psychosomatic disorders (Skille *et al*, 1989). Today, music is acknowledged as a therapeutic modality, with scientific evidence attesting to its psychological and physiological effects.

Music therapy has been defined as the controlled use of music, its elements and their influences on a human being to aid in the physiological, psychological and emotional integration of the individual during the treatment of an illness or disability (Munro & Mount, 1978). There are a variety of techniques used which can be adapted to the patient's physical status and psychological framework (Porchet-Munro, 1988).

Studies have shown that quiet music can raise the pain threshold and that during dentistry and surgery under local regional anaesthesia, music helps to relax patients and reduce stress. Physiological effects using music have been established: music has been found to decrease body metabolism, increase or decrease muscular energy, accelerate respiration, effect the volume of pulse and blood pressure, lower the threshold for sensory stimuli and influence intestinal secretions. Research has indicated that the tonal and rhythmic patterns of music are capable of affecting an individual on a hypothalamic, cerebellar and cortical level.

White noise, a form of synthetic silence, is defined as a heterogeneous mixture of sound waves extending over a wide frequency range. Synthetic silence suggests that the nature of the noise provides the illusion of silence. White noise with suggestion has been reported to suppress pain and reduce the need for analgesia during dental procedures.

Many patients with aphasia, even those who are severely impaired, can sing to lyrics of popular songs. Melodic intonation therapy is a technique which involves embedding short phrases and sentences in a simple non-linguistically loaded melody pattern. Progression of the programme leads eventually to repetition of the sentence and normal speech prosody. As the aphasic patient improves, the melodic aspect of the programme is faded and confrontation questions are introduced. The technique probably works by stimulating that latent language capacities of the nondominant hemisphere.

A study was carried out comparing muscle relaxation training and relaxing music in the reduction of trait and state anxiety. Subjects were 108 anxious female college students half of whom received three sessions of muscle relaxation training and half of whom received relaxing music. The results indicated that both types of treatment significantly reduced state anxiety although neither reduced trait anxiety.

Music therapy has been found to be helpful in children with autism and other mental or multiple handicaps. Five idiots-savants who were musically gifted but severely restricted in interacting with their environment found the production of musical sounds and the invention of musical sequence to be highly rewarding activities, enabling them a degree of control over subject matter that they otherwise lacked. When repetitive rhythms were presented as background music to a group of severely developmentally delayed children, three out of four subjects showed a definite change in level of development in the unstructured task of free drawing.



Alexander Scriabin (1872–1915). Russian composer whose works can only be explained in terms of religious mania. He envisaged music in terms of sound and ecstasy and as a mystic ritual.

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Music can decrease the overwhelming sense of isolation experienced by the elderly. Melody, pitch, rhythm and colour blended together and performed in different ways can evoke unique responses (Glynn, 1986). Often memory patterns are altered in the elderly, there being a tendency to remember the past better than the present. Music stimulates reminiscing in older individuals and promotes reality orientation and the overcoming of memory loss. Reminiscing may also assist the health carer in becoming more knowledgeable about the patient's past, present and future concerns. Two types of music programming can be used: (i) old nostalgic songs and (ii) ethnic music to enhance the patient's cultural and religious heritage.

Disabled people face problems of physical access in attending concerts but with improved technology

many now have access to hi-fi or other equipment and also to computer music. People with hemiplegia, for example, may play a range of instruments and also draw on a repertoire of piano music for one hand. Patients with Huntington's chorea have derived short-term benefit as well as enjoyment from music therapy and several studies have shown promising results in Parkinson's disease. Here music helps patients to walk and overcome "freezing episodes" and in conjunction with speech therapy it may improve the intelligibility of speech (Gloag, 1989).

Historically, music therapy departments have grown up with the larger institutions for the mentally ill. In line with the present hospital closure and resettlement plans there are moves to develop more work in community-based day hospitals and smaller units. The music therapist is increasingly being viewed as part of the local mental health unit's team with some music therapists choosing to run particular sessions with a co-therapist.

Further studies are needed concerning the effects of music therapy, including its combination with other therapies. Music therapists have demonstrated breakthroughs in achieving physical, emotional and cognitive responses from people who had seemed inaccessible to other forms of intervention, particularly handicapped children and adults (Skille *et al*, 1989). While music is an adjunctive treatment its potential and effectiveness are optimal if the therapist works as a fully-fledged member of a treatment team and can integrate his/her interventions into the general treatment plan.

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A full list of references is available on request from the authors.