

*Reprinted with permission of Wilfrid Laurier University*

## **Music Therapy for the Hearing Impaired**

Hearing impairments are believed by many to be the most devastating of the sensory handicaps. While visual impairments are environmental handicaps that keep us from things, hearing impairments are communication handicaps which keep us from people (Darrow, 1989)., Communication is the basis of our social and cognitive being, and without it we are cut off from the world. For this reason, clinical practice in music therapy with the hearing impaired has focused on those areas closely related to communication: auditory training, speech production, and language development. Through working on these communication deficits, music therapy has the secondary effect of improving socialization and self-esteem.

Music therapy still seems impractical to many people. This is largely due to misconceptions regarding the hearing impaired individual's capacity to hear and appreciate musical stimuli. As Darrow (1989) points out, only a small percentage of hearing-impaired individuals do not hear at all. She further suggests that, because of the variety of frequencies and the usual intensity, the perception of music is often more accessible to the hearing impaired than the complexities of the speech signal. Music is also highly flexible and can be modified to suit the client's hearing level, language level, maturity, and music preference. Robbins & Robbins (1980), who have designed a comprehensive resource manual and curriculum guide for music therapy with the hearing impaired, approach the subject with the attitude that musicality is inborn in every individual. By musicality they refer to our inherent sensitivities and capacities that respond directly to the experiences of rhythmic and, tonal variety and order described as "music." They stress that music is many sided in its effect on the human being. It is a medium of outward activity and inward experience, and it relates directly to speech and language, communication and thought, as well as to bodily expression and a wide range of emotions. Rather than excluding them, music therapy embraces and enhances the habilitation and overall development of those persons who are hearing impaired.

### **FOR PERSONS WITH HEARING IMPAIRMENTS, MUSIC THERAPY CAN:**

Enhance auditory, training and expand the use of residual hearing Auditory training is an integral part of the habilitation process with hearing impaired persons. These individuals must learn to interpret- and attend to the sounds- especially speech-in their environment, in order to increase the rate and quality of their social and communicative development. The central goal in auditory training is to develop the hearing impaired client's residual hearing to the maximum possible extent. Persons with hearing impairments must learn to listen, a complex mental and aural process. Auditory training attempts to develop focused and analytical attention to sound in the hearing impaired client, and it can become a tedious and uninteresting process. Music, therefore, becomes a useful tool with which to motivate and enliven the sessions. Speech and music contain many common properties. The auditory perception of speech and music involves the ability to distinguish between different sounds, their pitches, durations, intensities, and timbres, and the way in which

these sounds change over time. These properties aid in the listener's ability to interpret sounds and attach meaning to them. These commonalities between music and speech allow music and music therapy to provide an alternative and pleasurable tool to enhance traditional auditory training techniques (Darrow, 1989).

Music therapy procedures can effectively address a number of objectives in auditory training. Attention to sound, attention to differences in sound, recognition of objects and events from their sounds, and use of hearing to determine distance and location of sound can all be trained through musical experiences (Darrow, 1989). Further, Robbins & Robbins (1980) found that suitable music is more easily heard and assimilated than speech and thus is more likely to stimulate a natural motivation to use residual hearing. Amir & Schuchman (1985) employed a music therapy programme to develop and improve skills in awareness of musical sound, awareness of tempo and perception of simple rhythm patterns, awareness of intensity contrasts, recognition of musical sounds, and comprehension of musical sound patterns. An investigation into the effectiveness of such a programme indicated that certain aspects of a profoundly hearing impaired person's residual hearing may be measurably improved through a systematic programme of auditory training in a musical context.' Specifically, subjects' discrimination levels significantly improved and the practice the subjects received in the music setting generalized to environmental sounds as well. Amir & Schuchman further supported the use of music because it provided an interesting diversification and positive learning experience, reinforcing the clients' use of the auditory modality.

*Enhance speech development and improve speech prosody.*

The speaking voices of persons, who are hearing, impaired are often described, as awkward and unnatural. These individuals commonly lack the internal feedback mechanisms necessary for monitoring and adjusting, for instance, pronunciation of words, vocal inflection, or speech rhythm. Consequently, their speech production is often unclear or distorted. Hearing impaired speakers tend to demonstrate fewer variations in pitch and intonation than normal hearing speakers, which results in a monotone. They often prolong syllables and/or sentences and frequently pause inappropriately. These rhythmic and intonation problems often affect speech intelligibility.

The development of these prosodic features of speech, the rhythm, intonation, rate, and stress, can be effectively aided by music therapy techniques and activities. Darrow (1989) discusses the use of music therapy in addressing speech intelligibility, vocal intonation, vocal quality and speech fluency. The breathing processes, rhythmic and timing requirements, and pitch and articulation needed for singing songs provide important structure and motivation for the clients. Darrow also stresses the importance of constant feedback by the therapist.

Darrow & Starmer (1986) studied the effect of vocal training on the fundamental frequency, frequency range, and speech rate of hearing-impaired children's speech. Hearing impaired speakers tend to have a higher fundamental frequency and vary pitch less, producing problems in speech intelligibility. The results of this study suggest that

specific vocal training and singing songs in appropriately lower keys may help modify the fundamental frequency and frequency range of hearing-impaired client's speech. Another study by Darrow (1984) points to the role of music therapy in training rhythmic responsiveness, thereby refining responsiveness to rhythmic elements of speech.

Staum (1987) also successfully used music notation to improve speech prosody in hearing impaired clients. She employed a visual notation system devised to help clients to match familiar and unfamiliar words or word sounds with the appropriate rhythmic and inflectional structure. Significant positive results were found for improved speech prosody as well as significant generalization and transfer of learning.

Robbins & Robbins (1980), after extensive work with hearing impaired clients, suggest that the potential contribution of music therapy should be evident in the reinforcement and/or quickening of the individual's overall learning and use of speech, greater vocal/verbal spontaneity and confidence, improved voice quality, and a freer use of intonation and rhythmic principles.

*Enhance, language development and education and improve overall communication skills*

For children with hearing loss, limited auditory input not only impedes the ability to hear the speech of others, but also has a negative impact on their own language development. Regular auditory exposure to language provides important information about vocabulary, syntax, semantics, and pragmatics, which are normally assimilated incidentally by the child. Without such exposure, the hearing impaired child commonly experiences a host of language problems. Common difficulties include reduced vocabulary, difficulty with numerous meanings of words, less appropriate use of vocabulary, less precise structure and content, and so on. Difficulties in appropriately using language further remove the individual from meaningful communication and interaction with others. Language problems can also have a negative effect on other academic tasks such as reading, writing and comprehension (Gfeller, & Baumann, 1988). Music therapy can contribute significantly to the communicative abilities and language education of the hearing impaired client. Gfeller (1990), for instance, discusses the rich repertoire of vivid music and movement experiences in music therapy which can be paired with spoken and, later, written words. Young children, especially, operate primarily at a motoric level and learn through direct manipulation of their environment. Musical instruments and materials are rich resources for sensory and motor involvement. The multi-sensory experience that music provides is a valuable learning tool which is eventually attached to mental representations or symbols (Gfeller, 1990). Musical events and sequences can be labeled or described by the music therapist, providing language models for the child. Since language rehabilitation can be a long, difficult process, the music therapist provides important motivation by designing activities to be playful and engaging. Music therapy activities can also provide an opportunity to experience language concepts in different contexts. Other investigations have also found the integration of music experience into language arts education to be beneficial (Darrow, 1989; Gfeller, & Darrow, 1987). Not only does it improve motivation, it provides a multisensory approach to learning that can

help the client to internalize the meaning of new words. Singing, for example, offers an opportunity for intensive listening and vocal activity. Learning songs can stimulate practice in auditory discrimination, differentiating and integrating letter sounds, syllabication, and pronunciation (Gfeller, & Darrow, 1987). It can also assist in the development of vocabulary and provide experiences for the study of sentence structure and semantics. Songwriting can fulfill many of these same goals. Songs also have the advantage of patterned drill without its monotony.

Beyond enhancing the language development and education of hearing impaired clients music therapy can further enhance their communication abilities by providing some awareness and insight into meanings conveyed by "tone of voice." Important cues in communication with others are such things as facial expression, body language, and pitch and dynamic intensity. Awareness and sensitivity to one's own and other's language stylization can be successfully addressed in the music therapy setting. By stylizing singing, and signing to songs in a stylized way, the individual can learn to use and be aware of these nuances in communication with others (Gfeller, & Darrow, 1987). Musical signing also provides an opportunity for exploration of emotional self-expression, since lyrics and melodic line together can project a greater degree of emotion than the spoken word.

*Promote socialization, self-awareness, emotional satisfaction, and enhance self-esteem*

Some literature has characterized hearing-impaired individuals as possessing feelings of inferiority and depression, as well as detachment and isolation (see review by Galloway, & Bean, 1974). Poor body-image and awareness, language and communication deficits, and social isolation contribute significantly to these feelings. Music therapy can provide an important avenue to address these issues and enhance the hearing-impaired individual's self-esteem.

Brick (1973) found eurhythmics--the art of harmonious and expressive body movement--and music activities provided clients with a pleasurable experience which utilized their creative powers. This, in turn, aided in the development of self-esteem, pride in accomplishment, and group cooperation. Robbins & Robbins (1980) also found group music activities to be effective models for social adjustment. The intrinsic rewards in music experiences seemed to motivate the resistive client to cooperate, the distractable to concentrate, and the failure expectant to complete his or her efforts. Clients who often do poorly in other areas can receive special support and compensation through achievements in music.

Body-image and awareness can also be improved through music therapy exercises. Galloway & Bean (1974) found action songs and movement to music particularly effective. Robbins & Robbins (1980) also stress the importance of realistic and positive self-image. They found that movement skills learned through musical experiences could significantly enhance self-confidence, coordination, natural poise, and a sense of physical well-being.

Singing, playing or signing original songs can also afford the individual important opportunities for self-expression and emotional satisfaction. Gfeller & Darrow (1987) suggest that signing or singing self-composed songs allows hearing impaired individuals to express or illustrate thoughts, feelings, and ideas that may be too difficult to produce in written form. Staum (1987) also found that music therapy techniques and procedures can actually provide a functional skill that can be readily integrated into private music lessons or the general music classroom. By having a skill transferrable outside the therapy setting, individuals may be more able, and likely, to experience new situations, meet new people, and find themselves working alongside other groups. This, in turn, may promote a sense of social responsibility as well as recognition, pride, and self- and social-esteem.



