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# THE ISSUE IS

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## Should Music Be Used Therapeutically in Occupational Therapy?

**T**he healing power of music has been recognized by various cultures for many centuries. This power, however, was often attributed to magic, either of the performer, such as a shaman or medicine man, or of the music itself (Deschenes, 1989; Hamel, 1979). The past century has brought forth efforts to empirically understand the effects of music on the human mind and body. Belief in the healing value of music has spawned the development of new disciplines, such as music and dance therapy. Occupational therapists have not fully explored its potential as a therapeutic modality. Should music be included in the repertoire of occupational therapy? I believe that music is not only a legitimate healing tool, but also an appropriate expression of the philosophy of occupational therapy. Music is a vocational activity for some and an active or passive leisure pursuit for others. It is a pleasurable, intrinsically motivating activity that can be easily graded and used to promote overall health through relaxation and movement. Music is both versatile and powerful in that it has the potential to involve all of the components of occupational performance—motor, sensory, cognitive, social, and emotional. In this paper, I describe the healing effects of music and discuss its present and potential uses in occupational therapy.

### Therapeutic Effects of Music

The experience of music occurs “physiologically, psychologically, affectively, and esthetically” (Rouget, 1985, p. 119). On the physiological level, music affects auditory perception. The sensorial manifestations, however, go far beyond audition. Music is also vibration, which is palpable (tactile) and, possibly, even visible (Rouget, 1985). In addition, mu-

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sic has somatic qualities in that it is essentially body movement. That is, we receive the vibrations and, in the case of participatory music, we can feel ourselves singing and interacting with the instruments.

Deschenes (1989) stated, “Music has much more than a simple physical impact on our body. In influencing the body kinetics and posture through the cerebellum and our emotions through the pneumo-gastric nerve, music happens to have a dynamogenic effect on humans. . . .When music reaches our ear, it also reaches our whole body and emotions imprinted in our muscles” (p. 2). The effects of music on the human mind and body occur simultaneously, but it is perhaps in the emotional and affective spheres that music has its greatest therapeutic potential. “Nothing is more laden with emotional associations than music; nothing is more capable of recreating situations that engage one’s entire sensibility” (Rouget, 1985, p. 123). Music can facilitate mood changes, alter states of awareness, modify one’s consciousness, and increase affective response.

Considering the wide range of human response and ease of access, it is reasonable to assume that music has great healing potential. Heinze (1990) suggested that music can be used to un-

cover formerly buried memories and emotions. Also, music can be effectively used to shift a person’s attention, to soothe agitation, and to aid with visualization techniques. Hamel (1979) stated that relaxing music can be used by healthy persons as well as by those with a wide variety of disorders, including active psychosis.

### Application of Music in Occupational Therapy

Occupational therapy addresses the dysfunction found in a wide variety of psychiatric, developmental, and physical disorders. The motor, sensory, cognitive, social, and emotional components of a person’s functional performance are all addressed. Considering the holistic philosophy of occupational therapy, its broad client base, and its traditional use of creative and purposeful activity, music would seem to be an ideal modality. Unfortunately, a search of the occupational therapy literature reveals that although music is being used in specific areas of practice, its full potential as a therapeutic tool has not been explored. Published accounts of the therapeutic use of music by occupational therapists appear to be limited to the practice areas of pain management, motor and sensory dysfunction, and certain forms of cognitive dysfunction.

### Pain Management

Heck (1988) used an experimental design to determine the effectiveness of activity in prolonging tolerance to pain. He concluded that significant pain relief can be obtained through engagement in activity that is purposeful, that is intrinsically motivating, and that captures the attention and interest of the patient.

Unfortunately, there was minimal discussion of the specific activity used in this study, and activity involving sound or music was not mentioned. McCormack (1988) concurred with the conclusion of Heck's study and provided specific examples of music as purposeful activity for pain reduction. These examples include active listening (including motoric involvement), auditory distraction, the use of background music to promote muscle relaxation, and rhythmic breathing.

### *Motor and Sensory Dysfunction*

Van Deusen and Harlowe (1987) described a study in which dance with accompanying music is used in an exercise program for persons with rheumatoid arthritis. An audiotape with the ROM [range of motion] Dance (1984) was used in a group format and then provided to each participant for home use. The experimental group in this study reported "significantly greater enjoyment of exercise and rest" as well as "better scores in range of motion than did the control subjects" (Van Deusen & Harlowe, 1987, p. 94).

Miller (1979) also supported the use of music and movement for increasing range of motion. In addition, she suggested specific musical techniques to be used with persons with limited muscle strength, abnormal gait, lack of proprioception, loss of sensation, speech and communication problems, and muscular tension. Unfortunately, there have been no efficacy studies on the use of these techniques.

### *Cognitive Dysfunction*

Farber (1982) stated that auditory input is useful in the treatment of comatose patients. Although music is not specifically mentioned, it is suggested that a small radio, conversation, and tape recordings of family members be used. Farber cautioned against the continuous use of the radio, because adaptation may result, thereby rendering the treatment ineffective.

Miller (1979) stated that musical recordings can increase reality orientation to persons, places, and things. Time orientation is not specifically mentioned, but it is certainly plausible that music could enhance one's sense of time by

increasing awareness of the environment and the relationship between timing and rhythm. However, it is also possible for the opposite effect to occur. Heinze (1990) reported that some persons lose time orientation while involved in a musical activity.

Silberzahn (1988) stated that there is a unique cell-firing rhythm in the brain that appears to be related to learning and memory. Therefore, rhythmic repetition may be an appropriate therapeutic modality. However, information on specific techniques or efficacy data is not available.

Music is used extensively with mentally retarded patients. Orff-Schulwerk techniques, originally developed for children, have been easily adapted for use with this population (Bitcon, 1969) and are employed by many rehabilitation specialists, including occupational, recreation, and music therapists. These techniques do not specifically address the cognitive deficits of this population; rather, they are designed to facilitate self-expression in a nonjudgmental atmosphere.

### **Discussion**

The therapeutic potential of music is multifaceted and profound. It legitimately belongs in the domain of occupational therapy because it can promote health through the use of activity that involves all of the occupational performance components. Yet the occupational therapy literature shows limited use of music as a modality.

It is especially surprising to find a lack of documentation regarding music as a facilitator of emotional health and social skills. A possible explanation for this deficit is that occupational therapists are indeed using music for such purposes but are not publishing their protocols or clinical results. It is interwoven into the fabric of our culture to believe that music, particularly with active involvement (song) and movement (dance), can heighten social involvement and can have an emotional effect. Because this knowledge is considered commonplace or intuitive, it may not be given sufficient consideration in formal studies. This is unfortunate, because the effectiveness of music as a therapeutic modality would have increased significance if its use were specifically applied

and goal directed, as in clinical protocols and research.

I believe that the occupational therapy profession could enhance its repertoire of skills while simultaneously increasing the validity of its methods by undertaking the rigorous study of music as a therapeutic modality. The studies conducted by music therapists and psychologists provide important background information for the occupational therapist interested in the therapeutic application of music. We need research specifically grounded in an occupational therapy frame of reference.

This topic lends itself to a wide variety of research methods. Certainly, rich descriptive information could be culled with the use of ethnographic or phenomenological methods, and many aspects of this topic could be studied using quantifiable studies. In addition, it is possible to use existing research designs in occupational therapy settings and modify them to study the effects of music. For example, Llorens (1986) employed a laboratory model to study tasks and activities, with the goal of assessing the degree of agreement among participants "regarding the sensory stimuli, intersensory stimuli, sensory integrative processes, motor activity, and sensory feedback" (p. 106). None of the activities used in Llorens's study had a strong auditory component (i.e., drawing, spinning, buttoning), but the model could easily lend itself to the study of musically oriented activities such as dance.

Boyer, Colman, Levy, and Manoly (1989) also used an experimental design with 45 subjects. The purpose was to document variation in affective responses to several activities. As with the Llorens (1986) study, none of the chosen activities involved music. However, this design would also be an ideal vehicle for a study of the effects of music as a modality.

### **Summary**

It has long been common knowledge that music profoundly affects human beings on a variety of levels. Occupational therapists have at their disposal a potentially powerful therapeutic tool, but the specific effects of this tool have not been documented.

Occupational therapists have a history of using music in their treatment,

probably to a greater extent than is documented in the literature. It would be advantageous for us to engage in research regarding the application of music to occupational therapy. ▲

## References

Bitcon, C. (1969). I AM! Orff-Schulwerk: Clinical application. In *Proceedings of the Fourth National Symposium on Creative Communication*. Bellflower, CA: Creative Practices Council.

Boyer, J., Colman, W., Levy, L., & Manoly, B. (1989). Affective responses to activities: A comparative study. *American Journal of Occupational Therapy*, 43, 81-88.

Deschenes, B. (1989). Healing beyond music: The application. In *Proceedings of the Sixth International Conference of the Study of Shamanism and Alternate Modes of Healing*. Berkeley, CA: Independent Scholars of Asia.

Farber, S. D. (1982). *Neurorehabilitation: A multisensory approach*. Philadelphia: Saunders.

Hamel, P. M. (1979). *Through music to self*. Boulder, CO: Shambhala.

Heck, S. A. (1988). The effect of purposeful activity on pain tolerance. *American Journal of Occupational Therapy*, 42, 577-581.

Heinze, R. (1990, January). *The effect of sound and music on the human mind and body*. Symposium conducted at the National Meeting of Saybrook Institute, Belmont, CA.

Llorens, L. A. (1986). Activity analysis: Agreement among factors in a sensory processing model. *American Journal of Occupational Therapy*, 40, 103-110.

McCormack, G. L. (1988). Pain management by occupational therapists. *American Journal of Occupational Therapy*, 42, 582-590.

Miller, K. J. (1979). *Treatment with music: A manual for allied health professionals*. Kalamazoo, MI: Western Michigan University.

ROM Dance [Audiocassettes]. (1984). Madison, WI: University of Wisconsin, St. Marys Hospital Medical Center.

Rouget, G. (1985). *Music and trance*. Chicago: University of Chicago Press.

Silberzahn, M. (1988). Integration in sensorimotor therapy. In H. L. Hopkins & H. D. Smith (Eds.), *Willard and Spackman's occupational therapy* (7th ed., pp. 127-141). Philadelphia: Lippincott.

Van Deusen, J., & Harlowe, D. (1987). The efficacy of the ROM dance program for adults with rheumatoid arthritis. *American Journal of Occupational Therapy*, 41, 90-95.

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