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Music Therapy in the Special Education Setting

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The utility of music therapy as a related service modality in special education is far reaching, yet many professionals in the fields of education and psychology know little about this specialty. Music therapy is a creative art therapy that crosses multiple areas of treatment and can be effective in facilitating development in numerous areas of children's functioning. Music therapists both as clinicians and consultants can augment other related services as well as make unique contributions to the special education classroom.

This article describes the benefits of music therapy and how music therapy can be integrated into various aspects of special education services. The first part describes music therapy and the rationale for its effectiveness. The next section illustrates the broad application of music therapy with other related services and asserts the importance of including music

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therapy in individual educational plans (IEPs). Finally, the contributions of music therapists as consultants are discussed.

WHAT IS MUSIC THERAPY?

Definition

Bruscia (1989) defined *music therapy* as “a systematic process of intervention wherein the therapist helps the client to achieve health, using musical experiences and the relationships that develop through them as dynamic forces of change” (p. 47). Musical experiences can include singing or vocalizing, playing various percussion and melodic instruments, and listening to music. Although children can passively listen to music, they are more often actively engaged in making music. The various types of music therapy activities typically consist of either playing structured songs or improvisational music (i.e., spontaneous music making). The music therapist is often involved in playing music and can interact with the client through the elements in music. In understanding music therapy as a specialized field, it is helpful to distinguish music therapy and music education. The goals of the latter are to increase one’s knowledge about music and to develop one’s skills in playing a musical instrument. In contrast, the goals of music therapy are to improve one’s psychological functioning through the use of musical experiences. The goals for change in music therapy may be in the areas of attention, concentration, impulse control, social functioning, self esteem, self expression, motivation, and cognition. It is not important to the music therapist if the client sings correct notes to the song because the focus is on the deeper psychological process of using one’s voice for creative expression.

The “systematic process of intervention” refers in part to the rationale behind the use of music as therapy. A basic assumption is that musical behaviors, such as the way a client makes music, reflect and parallel underlying psychological functions. Systematic interventions in music therapy may lead to changes in a client’s musical behavior that are indications that a psychological change has also occurred. For example, a child who only plays the drum loud and fast at the beginning of therapy may, later in the therapeutic process, exhibit the ability to play softer and slower. This change could reflect a greater degree of affective self regulation (i.e., impulse control), increased social perception (i.e., awareness of the music created by other children in the group), and an expansion in the range of self-expression (i.e., awareness and tolerance of various emotions).

Underlying Processes

Why would one use music to achieve psychological change? The answer is in the inherent qualities of music. *Music* is defined as “organized sounds and silences in a flow of time” (Eagle, 1978, p. vi). It is the auditory and temporal characteristics of music that contribute to the uniqueness of music therapy as a treatment modality. The structure of music and its capacity to create organized forms are also important. The major elements of music—rhythm, melody, harmony, tempo, and loudness—are used in specific combinations at varying degrees of intensity to produce change in the client.

Music therapists tap into the power of music to arouse emotions that can be used to motivate and engage clients. People can sense the difference between the feelings produced by an upbeat marching band song and the gentle sway of a children’s lullaby. The speed and intensity of the musical beat creates the different feelings in each type of song. Research from the field of music psychology generally supports the theory that music affects heart beat, pulse rate, and galvanic skin responses (Hodges, 1980). The sensory impact of the music creates these physiological responses, which are associated with emotional reactions. The capacity for music to create expectations that are then satisfied or resolved explains the tension-release sequence associated with emotional arousal (Abeles, 1980; Radocy & Boyle, 1988).

Research in neurological functioning supports the association between music and emotion, both of which are processed in the right hemisphere of the brain (Hodges, 1980; Joseph, 1990; Schore, 1994). This association may have developed during human evolution with the survival functions of the brain that process environmental auditory stimuli and form emotionally adaptive responses. “It is possible that right hemisphere dominance for music may be an outgrowth ... [of] its capacity to discern and recognize environmental acoustics as well as its ability to mimic these and other nonverbal and emotional nuances” (Joseph, 1990, p. 10). It is well documented that patients with left hemisphere damage who may be unable to speak or recognize words can sing a melody (Joseph, 1990). Music thus provides a form of compensation for those with language impairments as well as a means of facilitating language development. Musical vocalizations precede spoken words both in infant development and in human evolution. The ontogeny of the infant’s cooing and crying therefore may be a recapitulation of the phylogeny of earlier species.

Therapeutic Relationship

In adapting the inherent power of music as a therapeutic agent many considerations must be made. The interpersonal relationships between client and therapist are as important, in the process of change, as the music. To use music as therapy and not education or leisure, it is necessary to have a music therapist who has adequate training in therapeutic processes and is able to establish a professional therapeutic alliance with the client.

One aspect of such a therapeutic alliance is the nonjudgmental attitude of the therapist (Rogers, 1961). A child's musical and nonmusical behavior is viewed as an expression of the self and an adaptive attempt to satisfy an underlying need. Even disruptive behavior can be understood as serving a purpose for the child. The clinical approach of the music therapist is to emphasize the positive and productive behaviors of the child, which can often be found in the experience of making music.

APPLICATIONS OF MUSIC THERAPY IN SPECIAL EDUCATION

Clinical Services

Music therapy can be a clinical treatment for children with a range of disabilities and a variety of needs (Boxill, 1985; Nordoff & Robbins, 1983). Music therapists can contribute to special education programs by providing direct clinical service and by serving as consultants to teachers and other specialists.

When providing direct clinical services the music therapist may conduct sessions in groups or with individual clients. Groups have the advantage of serving more children, tend to be more structured, and usually require paraprofessionals to be present. Individual sessions have the flexibility to focus more intensely on one child's needs; therefore, the clinical approaches can utilize more improvisational music (Nordoff & Robbins, 1977). It is ideal for a program to have both types of sessions. Although financial practicality usually dictates groups to be more cost effective, the advantages of individual treatment should be stressed. This is especially true with children who have severe impairments that require more attention and those who are behaviorally disruptive and may detract from the group experience of others.

In group sessions the ideal number of participants is four to eight, with the children seated in a circle. The therapist usually plays the songs with guitar or piano. The session starts with a "Hello" song, which serves as a transitional function from previous classroom activities, and ends with a

"Good Bye" song that gives a sense of closure to the musical experience. Within this established structure, various activities take place during the middle of the session, including singing songs, playing instruments, and moving to the beat of the music.

Instruments (e.g., maracas, tambourines) can be used one at a time with each group member taking a turn or all together with everyone playing his or her own. Larger instruments (e.g., conga drum, xylophone) can be shared. The children are often given a choice of which instrument they want to play. Children can play solos, duets, or in small subgroups (e.g., all boys, all girls, all children with maracas, all children with tambourines). When playing a solo the child improvises and the way he or she chooses to make music is accepted as a means of self-expression and creativity.

During a movement activity all children can be directed to engage in the same movement (e.g., clapping hands, stamping feet, jumping), or they can be allowed to create their own ways of moving to the beat. Vocal sounds are also accepted nonjudgmentally as a form of expression. The particular sounds that a child makes can be used by the therapist as a motif in a spontaneous song.

Behavior modification techniques may be necessary to maintain group structure and to shape appropriate behaviors toward particular goals. For example, the opportunity to play an instrument can be used as a reinforcer contingent on the child exhibiting on task behaviors (e.g., sitting in the seat). Humanistic attitudes such as nonjudgmental acceptance, positive regard, and client-centered focus (Rogers, 1961) are most fitting with the creative self-expression of music therapy. The concept of the *music child* refers to the inherent musicality within each individual that is unique, naturally positive, and can be nurtured and expanded through music therapy (Nordoff & Robbins, 1977).

Multidisciplinary Applications

Many goals can be addressed by clinical music therapy services. Unlike other supportive services (e.g., speech therapy, physical therapy) that tend to have circumscribed goal areas, music therapy crosses multiple modalities and thus can simultaneously address several needs. For example, although a physical therapist may be concerned with nonphysical (i.e., psychological) factors of a client, such as the child's motivation to attempt new exercises, the primary goals and criteria for evaluation are the improvement of physical and kinesthetic abilities. In essence, physical therapy emphasizes improving a particular area of functioning (i.e., physical movement). By contrast, music therapy is not defined by

a specific area of functioning but is characterized by particular activities that involve music as a focus. Changes in musical behaviors are only music therapy goals to the extent that they reflect changes in nonmusical areas.

As a specialty that is defined by activity rather than area of functioning, music therapy has a wide range of application. A music therapist can work toward improving articulation and language (as in speech therapy), gross motor movement (as in physical therapy), fine motor movement (as in occupational therapy), concept formation (as in education), and impulse control (as in psychological counseling). This is the "interdisciplinary nature of music" (Boxill, 1985, p. 16).

Following is a brief outline the transdisciplinary areas that can be enhanced through music therapy.

Speech and language. Music as a right-brain process can facilitate language, which is a left-brain process. The intonations of melodic sounds are rudimentary elements for speech. A nonverbal child who is resistant to speaking may feel more comfortable in the nonjudgmental and nonverbal activities of music making where any vocal sound is accepted as a creative part of the improvised music. Vocal sounds that are spontaneously emitted and those that are elicited from the music making can be reinforced when reflected by the therapist and incorporated into the song.

Children find music enjoyable and are generally eager to participate in the musical activities. This intrinsic motivation can be used to generate language, such as when a child must verbally identify an instrument by name before he or she can play it. Learning words and articulating particular phonemes can be aided through singing songs (e.g., learning the sequence of the alphabet from the ABC song). When the music therapist creates a comfortable psychological environment children tend to feel relaxed and to decrease any inhibitions related to speaking, and natural language is allowed to emerge.

Physical and kinesthetic. The capacity of music to relax and motivate, as in language development, is also relevant to physical development and remediation. A child with limitations in hand and arm movements, when motivated to engage in music making, may reach for an instrument at a strategically placed distance, thus increasing extension. The gross motor movements of swinging a mallet to strike a drum can help to increase the

range of motion. The tasks of holding musical instruments (e.g., maraca, drum mallet) can be opportunities to develop fine motor coordination and muscle strength.

Slow and gentle music can relax a child with hypertense muscular contractions so to allow increased flexibility. Music activities that involve clapping, stamping, or jumping can be varied in intensity to include several degrees from soft to loud and will provide kinesthetic feedback and awareness of muscle tension.

Educational. Some of the many ways that music therapy can support the education of children with disabilities are in the areas of cognitive development, especially problem solving. Songs can be mnemonic devices for remembering sequences (as in the alphabet song) or categorical structures (such as a song about farm animals or colors). Songs can facilitate associational learning when a sound is connected with a concept (e.g., a cow makes a "moo" sound) as well as connecting a particular vocal sound with a particular body movement. Contrasts of loud and soft can be developed through multisensory channels (i.e., visual, auditory, kinesthetic) while striking a drum, clapping hands, and vocalizing at different extremes. Such multimodal stimulation enhances learning by providing more than one neural pathway (Joseph, 1990).

The creative process itself can be viewed as a task of problem solving. Children with disabilities are challenged to adapt their existing abilities in ways that enable them to produce music. For example, a child must hold a mallet to strike a drum. Some music activities are structured to challenge a child to create a sound or a body movement that is different than those created by other children in the group. This problem-solving task requires perception and retention of other children's behaviors, the initiation of one's own behavior, and a comparison of the two. These mental processes can generalize to other types of educational tasks. Again music provides the motivation, affective stimulation, and structure to assist with these cognitive processes.

Psychological. Many areas of mental functioning can be listed here and addressed within the music therapy sessions. One function, impulse control, is particularly relevant to the special education population. Rhythm and the basic beat of music are organizing elements. When a client can internalize the consistent and steady pulse of a song he or she can begin

to experience order and structure. The music of impulsive children tends to have unstable beats and little organization (Nordoff & Robbins, 1985). Utilizing the inherent structure in songs can reinforce a sense of internal order in the child, evidenced by adherence to the beat of the music.

One technique is to direct the child to play a drum only on one beat of a song that is organized into groups of four beats. This task requires that the child feel or internally count the other three beats of the pattern to play the one beat in time. This can be particularly challenging, for the child may be emotionally aroused during the song, leading to impulsive behavior, yet motivated to play the instruments with the beat of the music because it is intrinsically reinforcing to be part of the song. A reconditioning is occurring as the child must regulate his or her own impulsive emotional state to play the song successfully.

Social. The group setting in music therapy is ideal for facilitating socialization and interpersonal interactions. When the members of the group play music together they are united by a common musical beat, and this unity contributes to group cohesion. Creating and playing different musical motifs or different-sounding instruments in the song allows children to express individuality while participating as a group. The music provides a more concrete medium in which group dynamics are manifested.

In the special education setting, music therapy can help to increase basic social perception in activities that require a member to imitate the body movement or rhythmic pattern of another member. Turn taking as well as impulse control can be developed in activities where one instrument is passed around the group, thus forcing children to wait during the solo of another child. Two children playing simultaneously on one drum can also be a socializing experience because each child has to negotiate the space of the musical instrument. The music group experience can be enjoyed by students not needing special education and therefore can be used as a so-called normalizing mainstream activity.

Aesthetic. It is important to note that although music therapy assists in the development of many areas of extramusical functioning, the music itself is an experience with inherent value. Music for its own sake contributes to the education process an aesthetic dimension that all too often is underemphasized or absent. Music provides the opportunity for subjective responses to an art form, responses necessary to foster aesthetic development (Radocy & Boyle, 1988).

It is possible and desirable at times for the music therapist to work conjointly with other clinicians and teachers because such dual-modality treatment can have augmented effectiveness. For example, a speech therapist and a music therapist can treat a child in the same individual or group session. The music can be used to stimulate language while the speech therapist makes interventions at particular windows of clinical opportunity. The speech therapist can assist in designing the musical activities to emphasize particular verbalizations and patterns.

Music Therapy in the IEP

It is important for music therapy to be recognized as a valuable clinical service on par with other related services. One way to accomplish this is to include music therapy in the IEPs. Inclusion contributes to the recognition of music therapy as a necessary form of treatment and should increase the inclusion of music therapists on multidisciplinary teams.

A critical element for including music therapy in IEPs is determining its effectiveness in attaining target IEP goals and thus establishing it as an educational benefit. "The meaning of educational benefit is not limited to only the academic needs of the student. ... Social and emotional concerns are subsumed in the concept of educational benefit" (Turnbull & Turnbull, 1998, p. 169). In certain cases music therapy can be a treatment of choice in alleviating barriers to a child's educational process.

One example of music therapy as an educational benefit is with disruptive children whose impulse control issues interfere with learning. Music therapy, more than verbal counseling, may be the most effective type of intervention for addressing such needs. In this way prescribing individual or group music therapy is essential for improving these children's capacities to benefit from special education and therefore should be included in the IEPs. Another example is children with autism. This disability is characterized by severe impairments in social and verbal functioning. In many cases music therapy is highly effective: Some children with autism respond to music, are extremely motivated by it, and exhibit an unusually creative aptitude for it (Alvin, 1978).

Although not considered a mandated service, music therapy falls within the definitions of related services. Therapeutic recreation is one area listed as a related service (Turnbull & Turnbull, 1998). However, music therapy is not merely a leisure activity but a sophisticated psychological treatment. It is more appropriate, therefore, to include it under psychological or counseling services. As psychologists and special educa-

tors become more informed about the effectiveness and versatility of music therapy, it is more likely to be included in IEP treatment planning.

MUSIC THERAPIST AS CONSULTANT

Using Music

In the special education setting the music therapy consultant often provides direct clinical services through individual, group, and multimodal joint sessions. However, contributions to the program can be made through indirect interventions such as consultations with teachers and staff regarding the use of music outside the music therapy sessions. In addition, the music therapist as a clinical member of the team can affect the therapeutic milieu of the program.

The previous section outlined the structure of special education music therapy sessions as well as the use of music to facilitate development in nonmusical areas. These interventions made by the music therapist can be adapted and used by teachers and related service clinicians. Some music therapy activities involving songs and simple instruments are applicable for use in the classroom teachers' circle time and other group educational activities. Using such activities can reinforce the benefits from the music sessions and can familiarize the children with the repertoire of the music therapist. Consultations with physical, occupational, and speech therapists can lead to the incorporation of music as a support in those clinical services. The music therapist can create customized audio cassette tapes that provide songs used in the music therapy sessions as well as specific types of music needed in the related service.

Situations in which teachers and other clinicians utilize the therapeutic potential of music are not music therapy per se. This may be considered a form of music in therapy or music in education because the music is an auxiliary function rather than filling the central role (Bruscia, 1989). Music therapy uses the particular relations between the child and music therapist, between the child and his or her own music, and between the child's music and other children's music, as "dynamic forces of change." (Bruscia, 1989, p. 47). Music therapy fosters changes in the client's musical behaviors and musical relations that parallel and reflect psychological changes. The music therapy consultant therefore is involved in both music therapy, as in direct service delivery, and auxiliary uses of music, as in facilitating music in related treatment.

Therapeutic Environment

In addition to formally providing special education staffs with ways to use music, the music therapy consultant can also provide means of therapeutic interventions. Music therapy is more akin with psychological and counseling services than with leisure or recreation activities. The music therapy sessions themselves are therapeutic environments that facilitate change. To some extent music therapy consultants can assist teachers in creating therapeutic conditions in the classroom.

Rogers (1961) outlined some facilitative conditions of the therapeutic environment that include empathy and positive regard. Although some educational approaches may include a therapeutic philosophy, the actual skills of therapeutic intervention are more difficult to implement. The interpretation of and response to certain behaviors are different when one is attempting to intervene as a therapist. For example, behaviors that are disruptive in class can be seen as an expression of that child's psychological dynamics and emotional needs. Within the structure of the class those needs can be addressed therapeutically in the same way as they may be addressed within the structure of a music therapy session.

If a child in a music therapy group is upset and crying, the music therapist may intervene by reframing the crying as an improvised musical sound and create music that is in tune with the pitch and rhythm of the crying. The results of this type of empathic response may be an increase in attention toward the therapist and movement toward resolving the emotions of the upsetting issue. This example illustrates a basic therapeutic principle of meeting the child where he or she is at, allowing the child, in a nonjudgmental manner, to experience emotions. Such interpersonal interventions will facilitate psychological growth more than interventions aimed at merely controlling behavior.

In discussing a child's psychological dynamics, the music therapist can offer alternative frameworks for understanding a child who may act differently in the music sessions than in the classroom. The music therapist can discuss interventions that tend to be effective in the therapy sessions. Another form of assistance to the teachers and paraprofessionals occurs when the music therapist models therapeutic responses. Teachers who are flexible and open minded may want to observe the music therapist in the session and adapt the principles and techniques that are useful.

Music therapy consultants can affect the classroom environment by offering creative therapeutic solutions to the psychological dynamics of the students. A critical element is the receptiveness of the teaching staff to learning different ways of working with children. A difficulty exists in the

contrast between the therapeutic approach and the academic approach. Each has its value and appropriate place in the special education setting, and teacher and therapist can mutually benefit from collaboration and discussion of approaches.

CONCLUSION

Music therapy has been described as a clinical modality that uses music as a central basis of activity. The inherent potential in music as an agent of change can be applied to various educational and related services in the special education setting. The music therapy consultant can facilitate development in several areas of functioning through direct clinical contact and through consultation with the multidisciplinary team. It is important for psychological and educational professionals to be informed of the diverse utility of music therapy and to work toward incorporating music therapy into special education programs.

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