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A Case Study of Music Therapy with Autistic Child

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Music is a language: it is the means of emotional expression through actively singing, playing, or listening to music, and a way of communicating through the exchange of non-verbal messages with musical elements, such as rhythm, melody, and harmony(Gaston, 1968). Music provides for self-expression. Through active music making or listening, music provides a safe environment to explore and experience the individual's needs of self-expression. An individual who wishes to express his/her emotional needs within a socially acceptable way might express themselves in terms of music according to the musical forms and possibly learn the feeling of acceptance by others through the acceptance of music.

Music therapy is an interpersonal process in which the therapist helps the client to improve, maintain, or restore a state of well-being, using musical experiences and the relationships that develop through them as dynamic forces of change (Brusica, 1998). Bunt (1994) defines music therapy as "the use of music within an evolving relationship between client and therapist to support and encourage physical, mental, social, and emotional well-being." (p. 8) Since one of the main areas that autistic children need to develop is communicating with other people, the definition of music therapy by Bunt clearly explains why music therapy is effective for autistic children.

In working with autistic children, music therapy commonly focuses on these areas: improving fine and gross motor coordination; increasing attention span; developing body awareness; developing concept of self; developing social skills; developing verbal and nonverbal communication; facilitating learning of basic academic and pre-academic concepts; interrupting and altering ritualistic, repetitive behavior patterns; reducing anxiety, temper tantrums, and

hyperactivity; and training sensory perception and sensorimotor integration - auditory, visual, tactile, and kinesthetic (Davis et al., 1992; Bonde et al., 2002).

To accomplish those goals, music therapy uses techniques such as: vocalization exercises (singing single or combinations of vowels/consonants with proper inflection and breath support); singing and chanting, often accompanied by body percussion; movement, including dance, creative movement, rhythmic exercises, and imitation techniques; musical games; instrumental performance with pre-composed or improvised music in both groups and one-to-one settings; and music listening (Alvin & Warwick, 1991; Boxill, 1985; Nordoff & Robbins, 1971).

As a means of nonverbal communication, music is effective and useful for autistic children to improve their condition. Though some people say that autistic children do not have any communication skills, there is still a way of communicating and interacting with them through accepting their own ways. Music is one of those few areas where we can reach and work with autistic children to help to improve their condition. Therefore music therapy can provide assistance to autistic children in development of their needs: communicative, cognitive, sensorimotor, and hopefully language development.

Method

This is a case study of R with whom I had worked for almost two years at the Nordoff-Robbins Center for Music Therapy. In creative music therapy, musical improvisation is the predominant means of interaction with the child to contact with the "music child." The "music child" is the part of the inner self in every child, which responds to musical experience, finds it meaningful and engaging, remembers music, and enjoys some form of musical experience (Nordoff & Robbins, 1977).

Creative music therapy involves two therapists working as a team, one at the piano and the other directly with the child. A primary therapist establishes a musical relationship from the piano, while a co-therapist facilitates the child's responses and engagement.

With R, each session started with the "greeting song" and ended with the "good-bye song." During the session, improvised music was mostly played by the therapists to engage him musically. Various kinds of musical instruments and pre-composed songs were also introduced to encourage him to communicate with others through interactive musical experience with therapists.

Background Information

R was a nine-year-old African-American boy who was diagnosed with Autism and Fetal Alcohol Syndrome at the age of one. Since then, his grandparents had been his legal guardians, and he was the only child living with them at their home. R attended the ABA (Applied Behavior Analysis) program, "Children's Annex" in Kingston, and was having occupational, physical, and speech therapy at school once or twice a week. He was able to say some words, such as "hello," "day," "clap," or "jump," but he didn't use speech in order to express his needs verbally. He sang some pre-composed songs with proper words, like "clap your hands to the music," and some children's songs, such as "ABC song," "Mulberry Bush," or "Here We Go Looby Loo."

Assessment

R's intake was done by two senior therapists at the Center in July 1997. During the session, he spent most of the time walking around the room and attempting to have strong physical contact with both therapists by hugging and holding them by force. He was physically active with movements, such as jumping, hopping, or clapping; but avoided any possible contact which would make him play the musical instruments. Also, there were a few vocal responses by single tone exchanging.

Treatment Procedure

R started in individual music therapy at the Nordoff-Robbins Center in September 1997. From then until July 1999 before I started working with him, he had worked with two different teams of music therapists at the Center. During this period, his musical participation showed mostly through vocalization and physical movement. He had been consistently given the opportunity to play musical instruments during the sessions, like a piano, a drum, a cymbal, or small percussion instruments, but he did not show any interest in playing them.

I started to work with him as a primary therapist at the Center in September 1999. For almost two years until June 2001, R had been my individual music therapy client, and we had total 44 sessions. There were two different co-therapists who worked with me as a team, each for one year.

Three Different Ways of Participation in Music

In order to explain R's musical participation in the therapy, three modes of activity from Nordoff & Robbins Scale II Musical Communicativeness can be applied: body movement, vocalization, and instrumental playing. According to Nordoff and Robbins (1977), "A client's response can take place in all three modes, or in any one or two, and the emphasis of the response can move from one mode to another." (p. 196)

R's musical participation was shown in the therapy through these three different musical responses: a rhythmic response of Physical (body) Movement, a singing response of Active Vocalization, and Instrumental Playing. It started with one and the others were added; the physical movement was seen from the beginning; six months later, his active vocalization was added into the continuous physical movement; and nine months after active vocalization appeared, the instrumental playing was finally combined with the two existing responses. Also, the emphasis moved on to a newly developed response, without ignoring an existing one.

Musical Responses (or Communicativeness):

Rhythmic Response of Physical Movement: Session 1 ~ 44

A Singing Response of Active Vocalization: Session 15 ~ 44

An Independent Instrumental Playing: Session 31 ~ 44

1. A Rhythmic Response of Physical Movement: Session 1 ~ 44

(a) Session 1

As soon as he came into the room for the first time, R hugged both therapists (co-therapist & me) one by one in the greeting song with a big smile on his face while I was singing the greeting song, and he softly hummed the music. In general the autistic child tends to avoid physical contact, so it was a strange behavior for me to see, even though I felt relieved and welcomed by his strong hugging.

Since it was his very first session with new therapists, R seemed to need to reassure himself that the music room was a safe environment for him by hugging both therapists one by one. After a while, I felt that his hugging was rather perseverative than meaningful behavior, and also, he seemed to use the strong physical contact to avoid having to cope with new challenges. Therefore, I tried to discourage his physical contact when possible, or transform them into an

interactive experience, for example moving together from side to side in the tempo of the music or vocalizing co-actively with the therapists.

(b) Session 3

For the first two sessions, R had two different moods, either a quiet one as he was sitting on the floor without any visible response to the music or an active one as he was running or walking around the room. Even though he showed two different moods through his physical presence, it was hard for me to understand how he felt each moment since he had always had a gentle smile on his face. In order to invite him into the musical activity, co-therapist had to be physically active to support his movement and to transform his energy into music.

The first musical contact happened in Session 3; but it happened by accident rather than through an established method. R was physically active, but that activity was not sustained to the point of playing the musical instrument during the session. R was running around the room while pushing co-therapist's back. Co-therapist tried to help him to learn the musical structure and stopped him on purpose in front of the drum or the cymbal after walking around the room to the tune of the music. I played a theme using the chromatic scale on the piano when he was moving around the room to support his movement and build tension, and then I played the big dominant chord when he played the instruments as if celebrating his instrumental playing, hoping he could get the idea of musical structure. I kept doing this for a while, trying to incorporate his physical movement in actual music making through instrumental playing. He played briefly the drum or the cymbal each time when he was forced to do so by co-therapist's HOH (Hand Over Hand) technique, but his playing wasn't sustained. Sometimes, he even avoided possible physical contact with co-therapist in order not to play them.

(c) Session 9

During the early sessions, R mostly showed his musical sense through his physical movements. He easily adjusted his movement to the music, like tempo variation, different rhythmic patterns, or dynamic changes. He walked differently in slow and fast tempi; galloped or skipped with syncopated rhythmic playing; and responded to the dynamic changes in music with light or firm stamping. While he was developing his physical presence in relation to the music, clapping was usually accompanied to support the body movement as a part of his musical responses.

In Session 9, R clapped his hands while watching co-therapist's tambourine beating, and his clapping became intentional and purposeful in relation to the music rather than impulsive. Later he held the tambourine for co-therapist to beat and softly tapped co-therapist's hand as if

directing her to beat it, yet he didn't play the tambourine on his own.

The beating started with four beats, which was suggested by him, and R directly looked at co-therapist's tambourine beating when co-therapist played the tambourine in the tempo of his clapping. He clapped his hands as if he were following co-therapist's tambourine beating and stopped his clapping when music stopped as he were aware of musical structure. The music became loud and rhythmical with use of the Spanish idiom to motivate him to continue his musical responses by clapping. In order to make his clapping meaningful behavior, I played the music while he was clapping and paused when he stopped. Therefore, brief rhythmic patterns and pauses were repeated several times, and then R showed his tempo flexibility through accelerating the tempo of his clapping to the music. Later he seemed to struggle with his ambivalence over whether to play the tambourine or not, but soon decided to hold the tambourine for co-therapist instead of playing it.

Until Session 14, R mostly showed his musical responses through his physical movements. From time to time, he softly vocalized some melodic ideas while wandering around the room, but his vocalization happened randomly and usually was not in the context of the activity at that moment. From the beginning of 2000, I had brought a guitar and a harp to encourage him to vocalize more without playing the melodic phrases, since he tended not to sing along when I played the melodic phrases on the piano. He showed some interests in playing those string instruments, but didn't show any improvement of vocalization during this period.

2. A Singing Response to Active Vocalization: Session 15 ~ 44

(a) Session 15

In Session 15, R's first direct musical contact through his vocalization happened together with physical movement. It happened during the new greeting song, which I composed for him to match his physical presence for sessions. I brought this new greeting song since the music with lightness and playfulness using the syncopated rhythmic patterns would show his physical presence. R seemed to carefully listen to the song. The music became rather fast and playful by adding some notes to both hands after I played some variations of the song using different moods on the piano to keep his interest in the music. R first took co-therapist's hands as if asking her to clap with him. Soon the vocalization with "Ah" was added into clapping. His vocalization was in accordance with the pitch of the song, C major, and he also seemed to try to sing the melody of the song with vowels. He stopped his vocalization and physical movements together at the end of each phrase of the song, as if he knew the structure of it.

As soon as co-therapist joined in his musical responses by following his movements with vocalization, R gave a big smile as if he were aware of what co-therapist was doing. Compared with his previous vocalization, in this session he voluntarily participated in ongoing activity, which was a new greeting song, adjusting his pitch of vocalization and rhythmic clapping to the song. Also his vocalization was louder and more expressive than usual.

After active vocalization was added to his musical responses, the following clinical goals emerged for him:

To continue to develop a co-active relationship with the therapists through musical experiences.

To extend his musical impulses towards more sustained interaction.

To develop spontaneous vocalization into more purposeful musical communication.

To increase attention span by staying in and completing musical activities.

(b) Session 20

Since clapping became a big part of his physical movements during the course of the therapy, I brought in a pre-composed song "Clap your hands to the music" by Levin (1998), which has a simple and repetitive melody and words with a basic beat. I thought that this song would help him to feel the basic beat, to control his impulsive clapping, and to understand the meaning of the simple words which were directing his physical movements, like "clap," "stamp," "jump," and "stop." From the first time I introduced the song to him, he was very excited about following the direction of the song and adjusting his clapping pattern to it.

We had sung this song many times during the last several months, but it was the first time that he actually sang the words of the song. R continued this song activity by singing the vowels of the song, like "clap your hands to the music," and clearly sang "stamp your feet to the music," when he was asked to do so while slowly galloping around co-therapist. I used to play the original version of the accompaniment pattern of the song. As soon as I heard him singing, I slowed the tempo to match his movement pattern and played only the walking base on the left hand without playing the melodic phrase of the song on the piano to hear his singing more clearly.

(c) Session 21

From time to time R brought some melodic ideas, which I didn't recognize but might be a part of some existing songs. In Session 21, R started to sing some melodic ideas with words "one, two, three," or possibly "one, to-day." It was hard to clarify what word he was really singing at this moment, as he was walking and clapping.

As soon as I heard this melodic idea from him, I started to improvise based on this theme by

playing in the jazz style, using the 7th chord, walking base line on the left hand, and syncopated melodic line on the right hand. R immediately recognized that I was playing the theme, which was taken from him, and got excited. He walked around the room guided by co-therapist and clapping three beats on his hands and singing enthusiastically. As the musical theme developed in the improvised song form, his vocalization became freer. I had never seen him open himself and actively participate in the actual music making through his vocalization, physical movement, and even some instrumental playing, with such enthusiasm.

(d) Session 23

During the summer of 2000, R had two minor surgeries. In order to increase his ability to focus, he started to take Ritalin from September. Therefore, when he came back to the Center after the summer, his mood had changed. By taking Ritalin, he seemed able to focus more on and participate more in the musical activity. He sometimes looked sad and even had tears on his eyes as if he were suffering from some pain. However, it was hard for me to say what caused his emotional changes, since his mood changed dramatically from one moment to another in experiencing the music.

In addition to the change in his personal life as he was taking the new medication daily, the co-therapist, who established a close relationship with him for last one year, had to leave the Center, and he had to meet new co-therapist. In spite of all the change, R seemed to cope rather well. However, during the first session (session 23) with new co-therapist, he spent most of the time clinging to me, as I was the more familiar person in the room.

After singing the greeting song, R came over to me wanting a hug or possible physical contacts. I first tried to hold his hand to play the piano instead of hugging. Then he leaned on my lap, and later firmly hugged me while continuing co-active vocalization. At this moment, I felt that he intentionally responded vocally in order to keep his physical contact with me, since he knew that through the last year's experience I would let him stay in this position as long as he participated vocally in music.

When I joined in his singing, R used to stop it. He seemed to like singing alone rather than singing along with others. In this session, I first gave him a simple melody line of the song, called "R's Song," from the previous sessions with a simple accompaniment on the left hand. As soon as R started to vocalize, I played the simple chord progression, repeating I - II, with both hands to support his vocalization. R first started to sing as a way to fill in the space between musical phrases with a simple melodic idea; then his melodic line was soon developed. When I joined in his vocalization in developing the melodic ideas, rather than mirroring, he soon showed active responsive singing through ascending melodic line as if he were answering the

musical question, which was asked by my vocalization. Nordoff and Robbins (1971) mention the developmental stages for the autistic child:

With the more active children, therapy followed a certain sequence of stages: The first was the gradual establishing of limited responsive activity during which fear or confusion was dispelled by the discovery of pleasure in the activity and the gaining of confidence in the therapy situation. From this stage, it became possible to develop individually specific forms of musical activity which heightened a child's interest and satisfaction and brought mobility into his response. This then led into an intensity of participation which could ultimately become personally self-expressive for a child. (p. 101)

R used physical contact, usually hugging, in order to adjust himself to the new environment and to gain pleasure and confidence through physical movement since it was his main interest. Through this process, he became self-expressive using the musical responses, vocalization, and instrumental playing.

(e) Session 27

While formal co-therapist was physically more active to satisfy his needs, which helped him become an active participant in the session towards the end of the last year, new co-therapist was physically less active to his perseverative body movements not related to the musical communicativeness. In Session 27, a significant event, which showed the newly established relationship between R and new co-therapist, happened. During the session, R introduced several musical ideas through singing the melodic phrase of different songs as sitting on the piano bench next me. He softly sang the short phrase of different songs. However, when I picked up the songs and played on the piano, he did not sing along or immediately switch to the different song. Finally, I decided to play "Here We Go Looby Loo" among several songs that he introduced on that day. R first quietly listened to the song, moving his body on the floor, and then started to walk around the room, gently taking new co-therapist's hand. Then, he sang along the last verse of the song whenever it came and even adjusted his keys of singing, modulating keys from C major to E major.

While R was continuing this activity, singing the last verse of the song and moving around the room with new co-therapist, I sang good-bye using the melody of the song, "Here We Go Looby Loo," hoping that he would sing along to part of it. For the first time during the course of the therapy, R sang "bye" voluntarily using his full voice at the end of the session.

Through the course of the therapy, R's vocalization had changed. He quickly picked up the therapist's subtle musical cues by singing or playing to them. Several significant musical themes were created from what was improvised during the sessions, such as a walking theme in a

chromatic scale, a side-to-side-movement theme in G minor, a clapping song in a Middle Eastern scale, and "R's Song" in C major. When I played one of these familiar musical themes, R immediately responded by moving his body or singing the melody from that theme. Also, his vocalization became more expressive and was more immediately responsive to both the therapists' vocalization and piano playing. R always sang in the right keys, no matter which key I was playing on the piano at that moment, and freely made variations on the melody. He even brought his own songs, which he learned from other places, and shared them with us in a creative and playful way.

3. Instrumental Playing: Session 31 ~ 44

(a) Session 31

R had achieved several clinical goals, which I have stated before, through the course of the therapy. He was able to extend his musical impulses towards more sustained interaction through physical movements and active vocalization. His attention span by staying in and completing musical activities had been increased. He successfully completed the pre-composed musical activities, i.e., clapping songs and some children's songs. His vocalization became more purposeful and expressive as a means of musical communication, except in the area of instrumental playing.

During the early sessions, R often resisted holding the mallets to play musical instruments with them and would walk away from the instruments. As time went by, he would walk near and around the instruments, and sometimes briefly touched them without showing any willingness to play them. I felt that direct suggestions would not work with him to make him play the instruments. Therefore, I indirectly guided him as mentioned in Session 3, while R was running around the room and punctuating the phrase on the drum or the cymbal. After that, he touched the strings of the guitar and the harp with his fingers, and began to use mallets, playing the metallophone, the conga, and the temple blocks. Also, we gave him the claves when he walked around the room, which eventually helped him to grasp the mallets.

In Session 31, instrumental playing was added to his musical responses. During the session, he was calm rather than active as he usually had been, and sat on the chair as if he were waiting for a musical direction. While I was playing R's drumming song in C minor, co-therapist held the hand drum and the hand cymbal, and presented each of them in front of him when it was directed by my singing. Surprisingly, R took the mallet and played the hand drum and then the hand cymbal whenever they were presented to him in music, for the first time. He first played

the basic beats on the hand drum for the extended moment, then played the hand cymbal when co-therapist presented it to him. From time to time, his beating became intensive as he added one or two beats to the basic beats. He seemed to listen to my playing and singing and came back to his playing when verbally directed by me in music.

It was a significant session in which he finally began to show his instrumental playing part of the music child. Through the entire session, several times R walked over to the conga, which was placed in the middle of the room, and looked at it as if he were wondering of what to do with it. Later in the session, somehow he voluntarily approached the conga drum, picked up the mallet, and played for about three minutes. It was the first sustained and independent instrumental playing in the course of the therapy.

To keep his conga beating sustained, I first matched my rhythmic pattern to his beating, and then played the trills to motivate him to keep playing. Soon I developed an improvised musical theme in C major based on his beating pattern. From time to time, R stopped his beating as if he were thinking something else. However, he was able to come back to playing the conga on his own, stimulated by playing the different rhythmic patterns and dynamics with ascending octaves using a minor 2nd on a high register of the piano, and by bringing back the improvised musical theme.

(b) Session 41

After this significant instrumental playing, R's progress became slow as his attendance was irregular, due to a transportation problem in accessing the Center, his illness, and another family member's health problem. We had only ten sessions over a period of five months.

During this time, R somehow consistently kept his interest in the instrumental playing. In Session 40, another improvised musical theme was developed, originally introduced by him. R softly sang "here we go" with a simple melody in C major, and then I adapted this theme to instrumental playing, singing "on the drum" or "cymbal." R immediately recognized what we were doing and participated in playing musical instruments, eagerly following co-therapist's HOH guidance.

R became a more active participant in actual music making and more independent in playing the musical instruments. R's interest in playing musical instruments had increased a lot. He showed the ability of using three modes of musical responses together in one activity: physical movement, active and intentional vocalization, and instrumental playing. Even though this happened before, like using three musical responses altogether in one activity, this session showed a much higher level of musical participation than early ones through his eagerness and flexibility in playing and his acceptance in taking the therapists' suggestions.

Discussion and Conclusion

During the course of the therapy, R had shown great progress in terms of his musical acceptance and flexibility and his openness to the new environment. R had shown his inner music child from the beginning of the sessions through three modes of musical responses. Starting from physical movement, he now uses two other musical responses more freely, a vocal and an instrumental one, to express and enhance his musical communicativeness. His vocalization became louder and more expressive and purposeful. His instrumental playing, which mostly had been developed in the last five months, was a big part of his musical responses in the sessions.

Working with R had been an exciting and surprising, yet unpredictably challenging experience for me. It was all about a search for a way to develop the inner personality, motivation and capacity for human experience as Aigen (1996) stated. R was a child who knew how to enjoy music, and I'll always remember him, who taught me the joyful part of music.