



## Song of Sensation

*LOTS of 18-month-old babies love to pound on pianos. But when Sara Romero started pounding, everyone knew it was something special.*

*Born blind and developmentally delayed, Sara was not the average tot.*

*Her instrument of choice was an organ, not a piano; and little Sara did not bang, she played television theme songs by ear.*

*by Vickie Hamilton-Smith*



**I**'D NEVER SEEN THIS WITH ANY child I'd worked with—and I'd seen a lot of children. Sara is just very incredible," says Suzanne Oliver. Oliver has been Sara's music therapist for the past 14 years. She is a graduate of the Music Therapy Program at Arizona State University's School of Music.

As a child, Sara found it difficult to communicate with others. After years of therapy sessions with Oliver, and lots of hard work, Sara has grown into a 16-year old who has established herself in local circles as an accomplished musician and composer.

Sara has trouble processing information in every way, from organizing information to analyzing and responding to it. Her lack of visual input compounds the problem. She also has difficulty comprehending concepts such as time and the sequencing of events. The music therapy process helps Sara work through her developmental delays and deficiencies in her neurological programming.

"Music profoundly affects Sara neurologically. She's motivated by it and sometimes that motivation is the key factor," Oliver says.

Therapists like Oliver use music to help their clients make connections outside of the music itself. Music becomes an instrument that helps treat individuals with challenges ranging from blindness to autism to Alzheimer's disease. Music entices interaction and compels movement.

At ASU, the Music Therapy Program has trained people for this field of mental health and special education for decades. The program teaches students how to assess a client's needs and problem areas, and then create therapeutic activities, called "interventions." Specifically designed interventions help clients to improve motor skills or enhance their cognitive, emotional, or social development.

"Music therapy is the application of music and various music therapy interventions to achieve specified educational and treatment goals," says Barbara Crowe, director of ASU's program. "Music is the tool through which the therapist involves the client in an interaction to treat or remediate a problem in some aspect of his or her functioning."

Interventions are applied within highly structured environments as well as in sessions with virtually no structure at all, except for that provided inherently within the music itself. All music therapy settings use a variety of activities to elicit and improve cognitive, communication, motor, social, and emotional skills.

These activities may be passive or active, Crowe explains. They include song, movement, and instrumental tasks that concentrate on a variety of skill areas. In the case of children with visual impairments, music therapy interventions provide information through singing and language-based tasks.

"Sighted children are stimulated by what they see, but children with vision problems don't tend to reach out and actively explore their environment," Oliver says. "The music therapy process may provide them with increased amounts of information about their world—

they become aurally in touch with their surroundings."

Children with vision problems learn to actively integrate sound, touch, and movement information. This can speed up their learning and promote social and language skill development.

"When the auditory, tactile, and kinesthetic components of music are applied within the music therapy process, blind children are able to overcome difficulties with movement, communication and cognitive ability, attention to task, and learning, such as in the area of self help skills," Oliver explains.

Sara was blinded by retinopathy of prematurity, a condition resulting from premature birth. She weighed just one pound, six ounces. She also suffered from hydrocephaly, a condition that causes fluid to accumulate around the brain. The disorders interfered with her information processing skills.

Oliver learned about Sara through Music Therapy Services of Arizona, an organization she founded shortly after graduating from the ASU program. Oliver's agency provided services to The Foundation for Blind Children. Sara enrolled in group music therapy sessions through that group.

"Sara was quiet and had difficulty communicating," Oliver recalls. "But there was an organ in the classroom. Sara would reach up to the keyboard and play television theme songs. The therapists knew she had an affinity for music."

To assess Sara's musical ability, Oliver decided to perform a composition she had written, one she was certain Sara would not know.

"I asked Sara to play the tune on piano. As she did, I played the bass accompaniment. When we were finished, she played both parts in their entirety," Oliver says. "She was only two-and-a-half years old! I knew music therapy would help her cognitive development."

Oliver and Sara worked in a highly structured setting to improve her language and communication skills. Children's songs such as "Itsy Bitsy Spider" and "Twinkle, Twinkle Little Star," helped Sara learn by hearing. By the time she was 7- or 8-years old, Sara had studied piano through the Suzuki Method and learned classical music.

"Music therapy interventions helped the active integration of Sara's neuropathways, increasing her ability to organize and process information," Oliver explains. "This promotes her ability to learn and more readily output the information she learns."

Sara's musical and communication skills continued to develop over the years. But she continued to struggle with cognitive abilities such as time and the sequence of events. Oliver responded with new interventions. They sang songs about daily activities, from getting dressed in the morning and going to school, to events at home in the evening.

Oliver also reduced the structure of the interventions. This encouraged Sara to develop her own self-imposed structure and incorporate the use of her own music. In the process, Sara expressed her personality while elevating her self-help and organizational skills.

Sara was motivated to prepare for her music therapy sessions. Today, she decides what music to play, which

## Musical Motivation in Health Care

"MUSIC THERAPY is not just about playing records—it's about knowing how to use music to motivate," says Barbara Crowe, director of the Music Therapy Department at the ASU School of Music.

"Music therapy is a mental health/special education profession that uses carefully planned musical activities to achieve desired changes in behavior and function," Crowe explains. Music becomes the tool to help people.

Eight to 10 music therapists are graduated each year from ASU. They emerge from the program as skilled musicians with strong scientific knowledge. They are prepared to work with a wide range of clients, including emotionally disturbed children and adults, the mentally challenged of all ages, the physically handicapped, the visually and hearing impaired, the learning disabled, and the aged.

Crowe says that a trained music therapist uses carefully planned "interventions" that are structured to meet the specific needs of individuals. Some seem as simple as engaging stroke victims in handbell playing to encourage specific arm movement. Others interventions are more complex, such as those designed for autistic children whose goals may include focusing, relating to, and communicating with others.

Early interventions for the cognitively impaired, such as children with Downs Syndrome, give individuals the ability to learn and improve as they grow older. They are able to maximize their ability to function in society.

Autism is a neurological disorder. The music therapist might try to help the autistic patient improve speech patterns as well as his or her ability to communicate with others. Music becomes the tool to help focus their attention.

"In certain instances of autism

the therapist is trying to get any reaction, or to get the child to respond on cue," Crowe says. "Songs such as 'If you're happy and you know it clap your hands' help the child focus on hearing the word and then clapping appropriately."

Similar interventions are designed for patients with Alzheimer's disease. These people suffer from organic degeneration of the brain.

"Music is usually the only thing they respond to, especially familiar music and activities involving percussion and drumming," Crowe explains. "The changes are dramatic. These people may be agitated, screaming and hostile. When the familiar music comes on, suddenly they are laughing and singing and are able to answer questions—all in the snap of a finger."

At ASU, the backbone of the program is an extensive use of practical experience in music therapy techniques. Students participate in a wide variety of community clinical settings, including nursing homes, private psychiatric hospitals, and rehabilitation programs.

ASU also has a new on campus Music Therapy Clinic.

"This well equipped, state-of-the-art facility provides students the opportunity to work with individual clients," Crowe says. "The student is given close, individualized supervision and guidance by the faculty to ensure maximum skills and techniques."

Music therapy is finding a home in other work settings. "Music therapists might work in physical medicine such as surgery, orthopedics, or pediatrics," Crowe says. "Many new health clinics use music therapy to assist with stress reduction and development of self awareness."

Crowe has directed ASU's program since 1981. She has more than 25 years experience in the field as both a practitioner and



Barbara Crowe instructs a group of future music therapists.

educator. She says the basic approach to the profession has not changed much over time.

"What has changed is the growing diversity of applications for music therapy," she says. "There is increasing recognition of the usefulness of music therapy by mental health professionals and medical doctors."

Therapists now find themselves helping clients with head injuries, expectant mothers with risky pregnancies, and a variety of patients undergoing medical

treatments for diseases such as cancer.

The ASU Music Therapy Program itself is changing. Crowe says community involvement is increasing, as ongoing, formal relationships are established with area hospitals and health care agencies. —VICKIE HAMILTON-SMITH

### The Music Within

MUSIC THERAPY generally is not related to the development of a client's musical ability. But in the case of Sara Romero, it struck a chord. Sara plays a variety of instruments, including piano, guitar, and violin.

"I gave Sara a guitar and showed her how to change the notes. She took off from there, moving her hands up and down the fingerboard," says music therapist Suzanne Oliver. "Sara taught herself the chords. She also developed a variety of strumming patterns. Now she is teaching me new things."

Since she was a tot, Sara has been able to play what she hears. Oliver loves to recite the story of Sara's father wanting his daughter to learn Beethoven's *Moonlight Sonata*. He bought her the compact disc. After listening to it once, Sara played the piece in its entirety.

"Clarinet was Sara's first frustration," Oliver says. "Though she played it as well as any beginner,



Sara Romero and Susan Oliver.

Sara wasn't an expert at it instantly. She got frustrated. She was upset because she couldn't play the music that was in her head."

Sara's mind is filled with her own complicated compositions. Her music is melodic and sounds familiar and comfortable. American music styles, from church hymns to country-western and jazz, are recognizable. Throughout her life, Sara kept this music carefully tucked away in her memory and on audiotapes.

During the summer of 1996, Sara's music took a new tack. By using music to learn about time and the sequencing of events, she also learned to better structure her own musical creations. Her parents and Oliver wanted Sara to have equipment that could record and catalog her complex compositions as well

instruments to use, and what she and Oliver will perform.

"Sara still struggles with information processing, particularly with spontaneity and emotion. However, the music motivates her to work through her difficulties," Oliver says. "Although her music is very visual and emotional, she has trouble understanding and expressing emotion verbally."

To help Sara make the emotional connection, Oliver has her create music that expresses a variety of feelings, such as happiness or sadness.

"I use her music to see where she has holes in understanding," Oliver says. "If the assignment is to play something that sounds sad, and it isn't, then we discuss and explore the feeling further."

Oliver uses improvisational exercises to improve spontaneity. Sara will choose a key, tell Oliver what chords she'll use, and then improvise on those chords.

"This is a way to get her to work through the sequencing of events, from the key to the chords. It's all a function of the timing and framework of music," Oliver explains.

Oliver designed a separate intervention to work on Sara's ability to read Braille. Sara read individual Braille letters rather than scanning the page to pick up words and sentences.

Sara's songs and stories were converted

to Braille and put to music; a series of chords Sara had identified. As Oliver played the chord progression, Sara read and sang what she had written. This forced her to read the Braille at a faster pace in order to keep up with the music.

"Sara's reading speed picked up quickly because she was so motivated," Oliver says.

Sara's understanding of the structure and organization of music also improved dramatically during the summer of 1996.

"It all began to make sense to her," Oliver says. "She had created music before, but now she understood that music had a beginning, middle, and an end."

During previous improvisations, Sara would create for 30 minutes at a time, with little formal structure to her music. The realization that songs she listened to on the radio lasted only two to four minutes had a huge impact on her.

"She began to comprehend the structure of time within music," says Oliver. "Music moves through time and Sara began to realize that you can't always wait to process information and think—you have to put information back out quickly."

"She began to convey her ideas and musical thoughts in a more organized and comprehensive manner," Oliver explains. "As this began to improve, Sara's spontaneity and organization in social conversation improved as well."

Music's effect on Sara is profound.

"Due to her developmental delays and unique neurological programming, Sara still is subdued at times," Oliver says. "Yet after we get going with the music, her personality comes out. Sara becomes more spontaneous and organized and displays improvement in her processing of information."

After years of music therapy, Sara is now able to process her thoughts quicker than before. Her thought and communication patterns are clearer and more organized.

"I can still see differences each day during every new session," Oliver says. "There is such a risk of people with conditions similar to Sara's using music to withdraw into their own world. The music therapist's job is to use the music to bring them out and connect them to our world. That's where Sara is right now. She is being her whole self and sharing that with others. She is actively sharing the gift of herself and her music with the world."

*ASU recently established an on-campus Music Therapy Clinic.*

*For more information about the Music Therapy Program,*

*contact the director, Barbara Crowe, Ph.D., 480.965.7413.*

*Send E-mail to Barbara.Crowe@asu.edu*

*Or visit the School of Music's site on the Internet at:*

*<http://www.asu.edu/cfa/music/>*

as expand her performance ability.

Oliver's ASU connections combined with Sara's musical abilities laid the groundwork for a benefit recital. The ASU School of Music's Music Therapy Department provided the sponsorship, along with Music Therapy Services of Arizona, and Services for Families First.

For her debut recital, Sara was to perform her own compositions at ASU's Katzin Concert Hall in March 1997.

But two months before the concert, Sara suffered a near fatal seizure. She recovered, but she lost some cognitive ability, and with it some memory and the music she had stored in her mind.

"Her body was physically insulted by the seizure," Oliver says. "Her motor coordination was affected. Her hands couldn't move quickly. So we worked to help her reorganize her thought processes and get her physical body going."

Sara doubled up on therapy during

her recovery. She took three to four times the normal amount of sessions per week.

"That's when we saw the incredible neurological affect," Oliver explains. "After six weeks of intensive therapy, Sara began to regain her memory as well as her motor and musical skills."

The Sara Romero Benefit Recital was a success. The event proved to be a huge turning point for Sara. Through her music she made another connection—this time with an audience.

"Sara experienced her first bout of stage fright," Oliver recalls. "We were so excited because she had made that connection."

The therapist used the intermission as an opportunity for an impromptu intervention.

"I explained to Sara that being nervous is part of performing, that it is the connection with the audience, and that she was to take those feelings and put them into her music." It worked.

"Since that first recital in 1997, Sara has connected with the idea of sharing music and getting excited about what people think of her music," Oliver continues. "Not only does she compose and perform daily on her Kurzweil K2500, she also participates regularly in jam sessions with other musicians. By the end of a rehearsal, she is more spontaneous and her personality fully revealed."

Sara now has the ability to tell musicians how she wants them to perform her works.

The Kurzweil K2500, purchased with proceeds from the recital, is a keyboard with built-in compact disc recording ability. Cakewalk Audio Software donated additional professional audio software. Sara can now perform her music, manipulate it in a computer, and then print it out.

"The biggest component is the printing of her music," Oliver says. "In the past, the music was all in her head and far too complicated

for us to attempt to write down.

"Today, when performing with others, often a drummer, vocalist, bass player, violinist, and flutist, Sara is just another musician—a skilled, talented musician jamming with the others," Oliver beams.

Sara continues to perform, compose, and collaborate. In addition to her regular performance sessions, she gives informal recitals in elementary schools to help children understand the abilities of people with visual impairments. She answers questions from the audience. Although she is not always spontaneous, Oliver notes that these outings help her learn to answer questions more readily.

Oliver believes that Sara Romero will continue to build her social, organizational, and work task skills with the help of music therapy.

"In a sense, it's almost like Sara is having music therapy sessions with herself every time she sits down at the Kurzweil."—VICKIE HAMILTON-SMITH