The Magic of Music: Children with Hearing Loss

Christine Barton, MM, MT-BC

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Where did your journey start?
For me, it began here...
Then here...
And here...
Then here...
Finally here!
Agenda

• Introduce music therapy profession
  • Music
• Introduce music/speech/language connection
  • Music
• Highlight key issues in music perception in children who are deaf or hard of hearing
  • Music
• Provide video examples of music experiences which support communication in children with hearing loss
Music Therapy?

“Stop! Stop! What’s that sound? What’s that sound!”
Music Therapy?

"Your room is right in here, Maestro."

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Music Therapy Defined

The clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed a music therapy program.

-American Music Therapy Association, 2005
MT-BC Credential
Music Therapist-Board Certified

- Earn a Bachelor, Equivalency, or Master’s in MT from an accredited university
- Complete a six month internship at accredited site
- Pass the Certification Board Exam for Music Therapy
- Earn CEUs or retake exam on 5 year cycle

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My Current MT Practice

• 200+ children/week
  – D/HH
  – ASD
  – Dev. Preschool
  – Elementary Life Skills
  – Montessori (PTT)
  – Private Practice
My Current MT Practice

• Dual Diagnosis: 40%
  – ASD/HL (5)
  – Down Syndrome/HL (2)
  – Mitochondrial Disorder/HL (1)
  – Bronchio-oto-renal/ASD/HL (1)
  – Intellectual Impairments/HL (3)
  – Medically Fragile/HL (1)
Why Music Therapy?

• Takes advantage of the child’s innate musical abilities
• May involve families in shared music-making experiences which can be carried over in the home
• Can target gross and fine motor skill development through playing instruments or creatively moving to music
• The structure and sensory input inherent in music help to establish response and role expectations, positive interactions and organization (AMTA, www.musictherapy.org)
• Current meta-analysis reveals music therapy to be effective in developing communication, interpersonal, personal responsibility and play skills in children (Kern & Humpal, 2013)
Children learn their native language by hearing it, then speaking it, and finally reading and writing it. Music learning follows the same sequence.
Music/Speech/Language Similarities

• Share terminology
  – Pitch, timbre, timing, intensity
• Both have melodic contour
• Similar strategies used when listening to music or language
• Early exposure is critical for acquisition of both
• Both follow a time-ordered sequence of skills or milestones
Music/Speech/Language Differences

- Music encompasses a greater spectral range
- Music can exist without language
- Language can be altered in music without changing the music itself
- Spoken language surrounds most children whereas music may not
By the time (NH) children begin school, they should be able to sing a song with correct lyrics, rhythm and pitch. And, guess what?…

They teached themselves!
Audiation is to music as thinking is to speech

Edwin E. Gordon
Music Learning Theory
Music and Hearing Loss

• HA and CI children perceive rhythm nearly as well as their hearing peers (Gfeller, et al, 2011)

• CI users less accurate than hearing peers in song recognition (Stordahl, 2002)

• Pitch perception and production more of a challenge

• Some CI users (particularly adults) don’t enjoy music, but many CI children do!
Music Training and Hearing Loss

A handful of studies have shown that music training for individuals with hearing loss can have positive effects in cognitive, linguistic, memory, and music perception domains.

(Abdi, Kahlessi, Khorsandi, & Gholami, 2001; Galvin, Fu, & Nogaki, 2007; Peterson, Mortenson, Gjedde, & Vuust, 2009; Yuba, Itoh, & Kaga, 2007).
Deafness and Comorbid Conditions
Gallaudet Research Institute (2009-2010)

- 40% of D/HH children have comorbid conditions
- 1 in 59 D/HH children receive services for ASD
- More children (35.4%) with profound loss have the dual diagnosis
- Result: deaf children receive the ASD diagnosis later than hearing peers (Vernon and Rhodes, 2009)
Shared Music Making

Turns Me into We!
“I feel like I am constantly putting out fires.”
Strategies

• Utilize the team with the family at the core
• Enlist and coach parents to help generalize targeted goals across multiple settings
• Provide structure/routine
  – Visual schedule/class rules
• Provide music experiences/instruments that require no formal training
Strategies

• Simple directions (use fingers as mnemonics)
• Get attention first (“show me you are thinking about me”)
• Appeal to all the senses
• Repetition
• Choices and alternatives
• Tell them what they can do
• Do not ask rhetorical questions!
Considerations/Observations

- Each child is unique
- Hearing loss is usually addressed first
- Intervention/placement is chosen based upon the most current need
- Spoken language (and even reading) can occur after 5 (Wodka, 2013)
- Hearing devices make a positive difference in the quality of life for individuals and families
- Music offers the potential to create relationships and provide life long enjoyment

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Resources

• The Listening Room (Advanced Bionics)
  – www.thelisteningroom.com

• Perspectives on Deafness and Autism Webinar Series
Resources

• Gallaudette Clerc Center
  – http://www.gallaudet.edu/clerc_center.html

• More Than Meets the Eye: An Introduction to Autism Spectrum Disorders
  – http://www.gallaudet.edu/clerc_center/webinars/more_than_meets_the_eye_an_introduction_to_autism_spectrum_disorders.html

• Managing Behavior by Managing the Classroom: Making Learning Accessible for Deaf and Hard of Hearing Students with Autism Spectrum Disorder
  – http://www.gallaudet.edu/clerc_center/webinars/sharing_autism_research_on_deaf_or_hard_of_hearing_students.html
Resources

• Autism Research Institute
  – http://www.autism.com/services_visualhearing

• American Society for Deaf Children:
  http://www.deafchildren.org/deaf-autism-america

• Autism Speaks: www.autismspeaks.org

• Michelle Garcia Winner Social Thinking
  https://www.socialthinking.com/
Resources

• West Music
  – www.westmusic.com

• American Music Therapy Association
  – www.musictherapy.org

• Guidelines for MT Practice in Developmental Care
  - Chapter 9: Children with Hearing Loss (Barton, 2013) Barcelona Publishers
For More Information ...

Central Canal Creative Arts Therapies

Chris Barton, MM, MT-BC, Director, Music Therapy Services/Consulting
www.christinebarton.net

Phone: 317-475-9914
E-mail: cgbarton@sbcglobal.net

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