Evidence Topic: Therapeutic Listening Program

Evidence Question:
Specific area under investigation: Person, Intervention, Comparison, Outcome

Does the therapeutic listening program increase attention and focus during therapy sessions or class time?

Question Background:
What real life situations inspired this question?

Therapeutic listening is a technique based on the concept that exposing the client to specific sounds may facilitate the completion of functional tasks and/or improve retention (Kaufman, 2001). While this program is still in the early stages of research, some information is available for analysis.

In the mid 1900’s, Alfred Tomatis was the first practitioner to develop an approach for treating listening difficulties. Tomatis originally defined the role of the ear as the 'integrator' because the ear was significant in structuring organization at all levels of the nervous system. He recognized the close relationship between the auditory and vestibular systems and the importance of both as integrators of the nervous system. He connected listening to the development of receptive and expressive language, learning, motor control and motivation. Tomatis developed the first auditory training or listening training device, the electronic ear. This device used progressively filtered sound, specifically those sounds rich in high frequencies, to effect change. Tomatis was the first to recognize the importance of high frequency.

In the early 1960’s, Guy Berard worked with Tomatis and developed another method known as Auditory Integration Training (AIT). Berard felt that the original protocol of Tomatis was too lengthy and developed a different method of filtering sound. This technique used filtered popular music in which sound frequencies were electronically modulated at random intervals for random periods of time.
Sheila Frick, an occupational therapist, developed the *Therapeutic Listening Program* (Frick & Young, 2009). Therapeutic listening is a sound based intervention that is embedded in the sensory integration perspective. Therapeutic listening is a treatment that stimulates and exercises the vestibular cochlear system and the attending and organizing mechanisms of the middle ear. It also stimulates the inner connections throughout the central nervous system. It stimulates the CNS through use of electronically altered music. The music in *Therapeutic Listening* CDs gives the listener unique and controlled sensory information. The music is electronically modified to highlight the parts of the sound spectrum that naturally trigger attention and activate body movement, synchronizing it with the environment. Therapeutic Listening uses electronic modifications, along with organized, rhythmical sound patterns inherent in music, to trigger the self-organizing capacities of the nervous system.

According to Frick, therapeutic listening added to a sensory integration intervention can decrease the time necessary to improve sensory modulation, balance, movement, perception, exploration, sense of physical competence and language for individuals with learning disabilities, attention deficient disorder and even autism. Frick’s website includes documentation of multiple case studies that demonstrate positive changes with the use of the program. [http://www.vitallinks.net/studies.shtml](http://www.vitallinks.net/studies.shtml)


**Parameters of the Search:**

Keywords: therapeutic listening program, auditory listening programs

Websites, Resources: AOTA website, CINAL, ERIC, Vital Links

**Evidence Table**

*Contains appraisals of evidence reviewed.*

<table>
<thead>
<tr>
<th>Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Type of Evidence</td>
<td>Systematic Reviews and Meta-analyses</td>
<td>Randomized Control Trials (RCT)</td>
<td>Quasi-experimental And</td>
<td>Correlation and Non-experimental</td>
<td>Descriptive Studies &amp; Expert Opinion</td>
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<tr>
<td>Citation</td>
<td>Types of Evidence &amp; Access</td>
<td>Description of evidence/Types of Study</td>
<td>Levels of Evidence</td>
<td>Description of Population</td>
<td>Description of Intervention</td>
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<td>Hall, L., Case-Smith, J. (2007). The effect of sound-based intervention on children with sensory processing disorders and visual motor delays. American Journal of Occupational Therapy. 61(2).</td>
<td>Research article through AJOT</td>
<td>A quasi-experimental only one group with repeated measures.</td>
<td>This is a level Level 3</td>
<td>10 participants aged 5 to 11 years. Moderate to severe with SPD and visual motor integration delays.</td>
<td>Sensory diet implemented at home by parent under direction from OT for 12 weeks, last 8 of which included therapeutic listening.</td>
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<tr>
<td>Bazyk, S., Cimino, J., Hayes, K., Goodman, G., Farrell, P. (2010). The use of therapeutic listening with preschoolers with developmental disabilities: a look at the outcomes. Journal of Occupational Therapy Schools &amp; Early Intervention.3.124-138.</td>
<td>Research article found in Journal of Occupational Therapy Schools &amp; Early Intervention</td>
<td>Non-experimental design 1 group pre-post test</td>
<td>level 4</td>
<td>15 preschoolers from 3-6 years old, 10 males &amp; 5 females. The y were identified by the intervention team with at with limitations attention, attention, language function and classroom participation</td>
<td>Therapeutic listening in addition to their school based occupational therapy services. Pre-test October and post test April/May.</td>
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**EBPX Summary**

*Summary of the EBPX team on the collective evidence reviewed.*

The evidence was sparse of questionable rigor. Case studies gathered by *Therapeutic Listening Program* vendors describe positive changes. However, the two studies gathered for evidence did not show clear positive effects for the program. On the other hand, no negative effects were detected. At this time there is not enough evidence on this topic to make a clear conclusion.

Further study is needed to specifically analyze whether therapeutic listening improves attention and focus. Extended research for the benefits of therapeutic listening on the developmental participation needs of the children with disabilities would benefit the therapeutic community. When conducting a research study, having a larger control group and sample size would generate more reliable information. Given the evidence of the effects of behavior, additional measures of behavior should be incorporated in future studies of therapeutic listening. Research is also needed to examine the long term effects of therapeutic listening, particularly in terms of attention and focus.

**EBPX Strength and Impact Summary**

*Interpretation of the collective evidence reviewed by the EBPX team.*

**Strength of Evidence:** Suggestive evidence that this intervention may be effective.

**Impact of Evidence:** Based on individual response, methods without evidence are appropriate if methods without evidence are appropriate if methods backed by evidence have been ineffective for this person. Therapists are cautioned to carefully measure individual outcomes when selecting this intervention.