The Effects of Therapeutic Listening on Bilateral Coordination

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The Effect of Therapeutic Listening® on Bilateral Coordination
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INTRODUCTION

Background
- Therapeutic Listening® is a sound-based treatment developed by Sheila Frick, OTR, rooted in sensory integration.
- The Quickshift series uses binaural beat technology to improve bilateral integration and sensory modulation.
- Therapeutic Listening® is widely used as an occupational therapy intervention yet there is limited research reflecting the qualitative effects (Hall & Case-Smith, 2007).

Purpose of Study
- To analyze the quality of bilateral movement through a sensitive qualitative measure in typically developing children.
- This was a continuation study of a previous thesis completed in December 2014.
- Research question: For typically developing children, is the Therapeutic Listening® Bilateral Quickshift, when compared with white noise, more effective in improving bilateral coordination as measured by the quality of movement during bilateral tasks?

RESULTS

- Overall global scores on: rhythm, smooth and continuous, effort and motor planning, and symmetry and synchrony of upper and lower extremities aggregated across all items.
- The effect of the intervention was small but had a slight advantage over the control group for smoothness and rhythmicity. Analyzed individual items based on items that approached significance in previous study and after eliminating items with strong ceiling effect.
- Scissor jumps opposite sides
- Feet and finger tapping opposite sides
- Spider
- Backwards tandem walk
- Infinity walk
- The Quickshift series showed to have a moderate effect on the qualitative movement during bilateral tasks by improving smoothness and rhythmicity for specific tasks.

DISCUSSION/CONCLUSIONS

Overall Conclusions
- Binaural beats have an effect on bilateral coordination
- Able to qualitatively capture bilateral movement
- When compared to the white noise group, the Therapeutic Listening® group showed a greater improvement in bilateral coordination

Limitations
- Low power
- Strong ceiling effect
- Typically developing children
- Inconsistencies in setting, directions, and video quality
- Strong practice effect

IMPLICATIONS FOR PRACTICE

- The Quickshift series shows promise as a therapeutic intervention to improve bilateral coordination.
- Incorporating Therapeutic Listening® with different populations
- This study together with the standardized test scores from the previous study have a trending effect

Future Research
- Recruit a larger and more diverse sample
- Longer duration
- Consistency in filming and administration of tasks

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References