Music Therapy Intervention Across the Lifespan of Individuals with Autism Spectrum Disorder: A Meta-Analysis

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Existing literature regarding music therapy intervention for individuals with Autism Spectrum Disorder (ASD) is comprised of numerous independent studies, as well as four related systematic reviews focused on child and adolescent populations (Gold, Wigram & Elefant, 2006; Geretsegger, Elefant, Mossler & Gold, 2013; Whipple, 2004, 2013). In support of the goals of the American Music Therapy Association Strategic Priority on Music Therapy and ASD, the purposes of this meta-analysis are to broaden the scope to include the entire lifespan, incorporate more recently published research studies not included in previous reviews, and apply the National Autism Center’s (2015) evidence-based intervention guidelines to the music therapy studies meeting inclusion criteria for this meta-analysis.

Following a comprehensive search of existing literature, 12 studies, with 16 total variables analyzed, including a total of 170 participants were included. Using the Comprehensive Meta-Analysis software procedures and tool, data from these studies were analyzed as a whole, as well as by early childhood (ages 0-5; N= 6 studies, 111 participants) and child (ages 6-12; N= 5 studies, 51 participants) groupings. The one remaining study included adult (ages 22+) participants (N = 8). None of the included studies focused on the adolescent (ages 13-21) population.

Consistent with previous related meta-analyses (Whipple, 2004, 2013) for early childhood, as well as child and adolescent populations, the current analysis resulted in a medium effect size (d = .55), using a fixed-effects model. Unfortunately, within the National Autism Center (2015) National Standards Project, Phase 2 report, music therapy is still listed at "emerging intervention" status. Results of the current meta-analysis provide support for offering music therapy services as an effective treatment option for individuals with ASD across the lifespan as well as guidance to move music therapy closer toward evidenced-based intervention status for this growing population.

Keywords: Music Therapy, Autism Spectrum Disorder, Evidence-Based, Lifespan, Meta-Analysis
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Abstract

Existing literature regarding music therapy intervention for individuals with Autism Spectrum Disorder (ASD) is comprised of numerous independent studies, as well as few related systematic reviews focused on child and adolescent populations (Gold, Wiggins & Berauds, 2006; Gernsbacher, Defend, Muskett & Gold, 2011; Whipple, 2013, 2014). In support of the goals of the American Music Therapy Association (AMTA) position on Music Therapy and ASD, the purposes of this meta-analysis are to broaden the scope to include the entire lifespan, incorporate more recently published research studies not included in previous reviews, and apply the National Autism Center's (2015) evidenced-based intervention guidelines to the music therapy studies meeting inclusion criteria for this meta-analysis.

Following a comprehensive search of existing literature, 12 studies, with 16 total variables analyzed, including a total of 170 participants were included. Using the Comprehensive Meta-Analysis software procedures and tools, data from these studies were analyzed and results are reported. Of the early childhood (0–5 years old, N = 8 studies, 111 participants), and child (6–11 years old, N = 5 studies, 51 participants) groupings, the one remaining study included adult (ages 20–3) participants (N = 8). None of the included studies focused on the adolescent (ages 12–20) population.

Consistent with previous related meta-analyses (Whipple, 2004, 2015) for early childhood as well as child and adolescent populations, the current analysis resulted in a moderate effect size (r = .55), using a fixed-effects model. Unfortunately, within the National Autism Center (2015) National Standards Project Phase 2 report music therapy is still listed at 'emerging intervention' status. Results of the current meta-analysis provide support for offering music therapy services as an effective treatment option for individuals with ASD across the lifespan as well as guidance to move music therapy delivery towards evidence-based intervention status for this growing population.

Table 1: Meta-Analysis Results

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>N</th>
<th>d</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (381 subjects)</td>
<td>15</td>
<td>0.59</td>
<td>0.34, 0.84</td>
<td>&lt;.001</td>
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</tbody>
</table>

Additional Studies Supporting MT as an EBT


Table 2: Additional Studies Supporting MT as an EBT

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>N</th>
<th>d</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (5 studies)</td>
<td>50</td>
<td>0.59</td>
<td>0.34, 0.84</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

References


