What is the effect of deep pressure on children with autism spectrum disorder?

This CAT evaluated the effectiveness of using deep pressure as part of an occupational therapy treatment for children with autism spectrum disorder (ASD). Deep pressure has been found to be useful in conjunction with other strategies, although further research is needed to provide conclusive evidence for this treatment method.

1. Ask: Research Question
   In children with autism spectrum disorder, what is the effect of deep pressure input on attention?

2a. Acquire: Search Terms
   Patient/Client group: Children with autism spectrum disorder
   Intervention: Deep pressure input
   Comparison: Outcome(s): Attention

2b. Acquire: Selected Articles
   Piravej et al. (2009) conducted a randomized control trial (RCT) of 60 children with ASD to assess the therapeutic effects of Thai Traditional Massage (TTM) on major behavioral and emotional disturbances.
   Edelson et al. (1999) conducted an RCT of 12 children with ASD, ages 4-13, to evaluate whether deep pressure through Temple Grandin’s Hug Machine would reduce anxiety and arousal levels.
   Escalona et al. (2001) conducted an RCT of 20 children with ASD, ages 3-6, to determine whether massage therapy was more effective than reading attention therapy.

3a. Appraise: Study Quality
   Piravej et al. (2009): Inconclusive: Sample size was too small to show significant improvement. Real behavioral changes were difficult to assess as parents were not blinded and the short study duration.
   Edelson et al. (1999): Inconclusive: The quality was poor due to small sample size, un-standardized outcome measures, and possible biases and confounders that were not addressed.

3b. Appraise: Study Results
   Findings from each of these studies suggest that deep pressure intervention has a positive effect on behavior in children with ASD. Results from two of the studies revealed that deep pressure interventions reduced stereotypical and anxious behaviors, which allowed for more social relatedness with others. One of the studies specifically addressed how deep pressure can impact a child’s ability to attend in a school-based setting. Further research is needed in order to quantify how long and what type of deep pressure is most effective for children with ASD in order to achieve positive gains in attention. The other present need is to conduct more comprehensive research that will further endorse the use of deep pressure activities as an essential component in practice when treating children with autism spectrum disorder.

4. Apply: Conclusions for Practice
   The use of deep pressure activities may be useful as one component of therapy. However, because the reviewed studies proved inconclusive in supporting deep pressure use as a stand-alone treatment method, it should be used with caution and in conjunction with other forms of therapy. OTs may continue to incorporate deep pressure techniques according to the child’s need and closely monitor the child’s response. They should educate the parents on the purpose of deep pressure stimuli and discuss the lack of conclusive evidence supporting deep pressure techniques, noting that it can be beneficial in some children and not others. It is important to note that this treatment method has no adverse effects.

References

Reviewers:
Molly Grossman, OTS, Erika Gutierrez, OTS, Katie Lee, OTS
Chloe Pool, OTS, Pooja Shah, OTS, Bill Wong, OTS, April Yabiku, OTS
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? Unclear: Further research is needed to determine if deep pressure is effective for attention in children with autism spectrum disorder.