



3-2019

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Effective Interventions for Sensory Modulation Disorder in Children that Experienced Complex Trauma

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Case

George is a six-year-old boy that has experienced post-utero trauma. His biological parents often neglected and abused him. At the age of two, George was adopted. He is now demonstrating difficulty processing and responding to sensory input appropriately. Specifically, George is over-responsive to auditory input and under-responsive to tactile input. Due to these sensory modulation difficulties, George is struggling to succeed in class and behave at home.



1 Ask: Research Question

What are effective interventions to improve sensory modulation disorders among children that have experienced complex trauma?

2a Acquire: Search

Databases: PubMed; Clinical Key; Scopus; ProQuest; WMU Library

Search Terms: Sensory processing disorder; Child; Sensory integration; Sensory interventions; Complex trauma; Regulation; Developmental trauma

2b Acquire: Selected Articles

Fraser, MacKenzie, Vernel (2017): Scoping review of 16 articles that examined different sensory-based interventions for treating children that have experienced complex trauma.

Pfeiffer, Frolek, Arbesman (2017): Systematic review (five articles) that examined multiple interventions to determine best treatment approach for children that have sensory modulation disorders.

Warner, et. al. (2014): Quasi-experimental design that examined the usual treatment for those who have experienced trauma compared to using the Sensory Motor Arousal Regulation Treatment (SMART) program in combination with typical treatment.

Dauber, Lotsos, Pulido (2015):

Quasi-experimental pretest-posttest study that examined Trauma Focused Cognitive Behavioral Therapy intervention and the results it produced in children who have experienced trauma.

3a Appraise: Study Quality

Fraser, MacKenzie, Vernel (2017): Level IV Strength: Wide range of interventions, disciplines, and levels of research. Limitations: lack of overall occupational performance observations, focused only on symptomology, and potential bias in selection of articles.

Pfeiffer, Frolek, Arbesman (2017): Level I Strengths: Randomized control trials were used, compared multiple interventions, and longitudinal. Limitations: limited articles, lack of research evidence, small samples sizes, and potential bias.

Warner, et. al. (2014): Level III, n= 31. Strengths: reliable measures, strategies to reduce bias, and use of naturalistic clinical observations. Limitations: small scale, increased dropout due to method of data collection, and no random assignment.

Dauber, Lotsos, Pulido (2015): Level III, n=31. Strengths: High ecological validity, longitudinal, reliable measures for pretest and posttest. Limitations: small sample size, and no implementation of intervention data.

3b Appraise: Study Results

Fraser, MacKenzie, Vernel (2017): Sensory-based interventions were the most common component for treatment of children that have experienced complex trauma.

Pfeiffer, Frolek, Arbesman (2017): Self-regulation and sensory processing improved with cognitive and occupation-based interventions. Bass et. al (2009) had a significant improvement in the Sensory Profile overall score (p=.002). Nash et. al (2015) results showed significant improvement (p=.01) in inhibitory control and social cognition in children with Fetal Alcohol Spectrum Disorder and maintained these results at a six month follow-up.

Warner, et. al. (2014): SMART significantly reduced the internalizing behaviors of somatic complaints (p=.016) and anxious/depressed (p=.025) on the Child Behavior Check List (CBCL). No significance in overall Posttraumatic Stress Disorder Reaction-Index (PTSD-RI) score or externalizing behaviors.

Dauber, Lotsos, Pulido (2015): Trauma Focused Cognitive Behavioral Therapy had significant improvement (p<.005) on five clinical scales of the Trauma Symptom Checklist for Children. Most significantly on the depression, anger, and dissociation scales (p=.001). Posttraumatic stress had no significant improvements.

4 Apply: Conclusions for Practice

Children that have experienced complex trauma require a unique intervention approach as each case differs. The literature explored multiple options such as, sensory integration, sensory motor, cognitive behavioral, and attachment-based approaches as treatment interventions for this population. Using both sensory integration and cognitive approaches, creates the most client-centered treatment, that shows significant results as well. However, no single intervention appeared to produce the most effective outcomes. A combination of multiple approaches and disciplines best supports a client-centered intervention.

References

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Utilizing a variety of treatment approaches and a multidisciplinary team appears to be the most effective intervention to address sensory modulation disorders in children that have experienced complex trauma.

