

## Trauma, Sensory Processing, and the Impact of OT on Youth in Juvenile Corrections

**Maria Linkugel, BLA<sup>1</sup>, Mikaila Dvornak, BLA<sup>1</sup>, Joanne Estes, PhD, OTR/L<sup>1</sup>, Rachel Snodgrass, MOT, OTR/L<sup>2</sup>, Kierra Klein, BLA<sup>1</sup>, Ashlyn Williams, BLA<sup>1</sup>**

<sup>1</sup>Xavier University, Cincinnati, OH, USA; <sup>2</sup> Circleville Juvenile Correctional Facility, Circleville, OH, USA

DOI: [10.5014/ajot.2020.74S1-RP301C](https://doi.org/10.5014/ajot.2020.74S1-RP301C)

Date presented: March 28, 2020

Primary Author and Speaker: Maria Linkugel, [linkugelm@xavier.edu](mailto:linkugelm@xavier.edu)

**PURPOSE:** The main purpose of this research was to determine the impact of sensory-based occupational therapy intervention on youth's violent behavior in a juvenile correctional facility because there is limited literature related to occupational therapy in correctional facilities. The authors chose to study the relationship between trauma, sensory processing, and violence because current research suggests that most incarcerated youth have experienced trauma (Dierkhising et al., 2013) and trauma may impact sensory processing patterns and youths' aggressive behavior (Ford & Blaustein, 2013; Purvis et al., 2013).

**DESIGN:** The mixed methods study included three components, 1) quasi-experimental hypothesis testing to determine if rates of violence changed after occupational therapy intervention, 2) correlation analysis to determine the relationships between trauma, atypical sensory processing, acts of violence, and sensory-based occupational therapy intervention, and 3) individual interviews with incarcerated youth to explore their perceptions of occupational therapy.

**METHOD:** The authors reviewed the records of male youth at a Midwestern maximum-security juvenile correctional facility to collect individual data, including Adverse Childhood Experiences (ACE) Questionnaire scores, Adult/Adolescent Sensory Profile (A/ASP) scores, and recorded acts of violent. The sample consisted of youth who received a minimum of 300 minutes of occupational therapy intervention and an equal number of randomly selected youth who had not received occupational therapy services. The authors ran t-tests to analyze the rates of violence and calculated correlation coefficients to find out if any of the factors were related. Transcripts of the 18 interviews were analyzed to produce themes.

**RESULTS:** Incarcerated youth who received occupational therapy services had a significantly lower rates of violence following intervention ( $t(75) = 5.25$ ,  $p < .001$ ). Additionally, 52 out of 72 youth who had at least one recorded violent act prior to occupational therapy intervention had lower rates of violence after receiving occupational therapy services (72.2%). Significant correlations were found between trauma and the low registration A/ASP score ( $r(74) = .25$ ,  $p = .029$ ), trauma and the sensory avoiding A/ASP score ( $r(74) = .23$ ,  $p = .049$ ), and violence and the low registration A/ASP score ( $r(74) = -.25$ ,  $p = .032$ ). Qualitative analysis of 18 individual interviews with youth produced three emergent themes, occupational therapy "...helps me not to punch things", "I have a bright future ahead of me", and "I can go to them and they'll help me." Thus, occupational therapy intervention helped incarcerated youth make more positive emotional and behavioral choices, increase their sense of self-efficacy and optimism for their futures, and have access to emotional and social support, as well as occupational participation and a sense of autonomy.

**CONCLUSION:** Sensory-based occupational therapy intervention helped incarcerated youth regulate their emotions and played a role in promoting youth and staff safety by decreasing youth violence. Interviewed incarcerated youth described benefits they experienced from occupational therapy services and expressed appreciation for the skills they learned and the therapeutic relationships they developed. Occupational therapy services helped the youth develop positive behavior changes, grow emotionally, and learn valuable life skills.

**IMPACT STATEMENT:** This study provides evidence for the effectiveness of sensory-based occupational therapy intervention for incarcerated youth and can support funding of occupational therapy services in juvenile correctional facilities. It also provides valuable support for this underserved population.

### References

Dierkhising, C. B., Ko, S. J., Woods-Jaeger, B., Briggs, E. C., Lee, R., & Pynoos, R. S. (2013). Trauma histories among justice-involved youth: Findings from the national child traumatic stress network. *European Journal of Psychotraumatology*, 4, 1-12. doi: [10.3402/ejpt.v4i0.20274](https://doi.org/10.3402/ejpt.v4i0.20274)

Ford, J. D., & Blaustein, M. E. (2013). Systematic self-regulation: A framework for trauma informed services in residential juvenile justice. *Journal of Family Violence*, 28(7), 665-677. doi: [10.1007/s10896-013-9538-5](https://doi.org/10.1007/s10896-013-9538-5)

Purvis, K. B., McKenzie, L. B., Cross, D. R., & Razuri, E. B. (2013). A spontaneous emergence of attachment behavior in at-risk children and a correlation with sensory deficits. *Journal of Child & Adolescent Psychiatric Nursing*, 26, 165-172. doi: [10.1111/jcap.12041](https://doi.org/10.1111/jcap.12041)