

Trauma, Sensory Processing, and the Impact of Occupational Therapy

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Outline of Main Points

1. Problem and Questions
2. Research Design
3. Results
 - a) Retrospective chart review
 - b) Survey
4. Discussion and Implications
5. Conclusions

Problem

1. Acts of violence (AOV)
2. Lack of evidence

Retrospective Chart Review:

- Adverse Childhood Experience (ACE)
- Adolescent/Adult Sensory Profile (AASP)

Prospective Staff Survey:

- Perceptions of impact on skills and behaviors

1. What is the correlation between:

(a) trauma and sensory processing disorders;

(b) number of AOV among individuals who received occupational therapy and number of AOV among individuals who did not;

(c) sensory-based occupational therapy minutes and number of AOV committed within the facility

2. What are the perceptions of the facility's staff regarding the impact of occupational therapy on youth behavior and skill development?

Results: Trauma & Sensory Processing

N= 57 males, 14 to 20 years of age

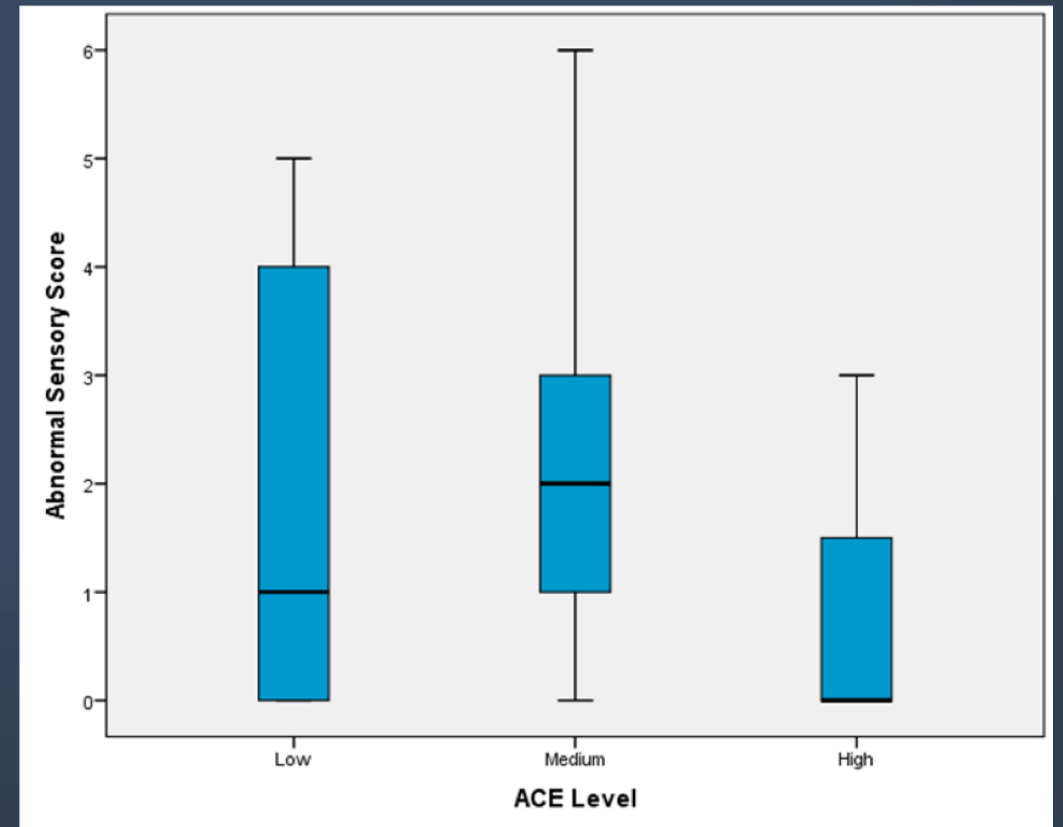
Table 1

*Relationship of Trauma and Sensory Processing
in Juvenile Offenders (N = 57)*

Relationship	<i>r</i>	<i>p</i>
Correlation of ACE and		
Low Registration	0.133	0.323
Sensory Seeking	0.136	0.313
Sensory Sensitivity	-0.132	0.326
Sensory Avoiding	0.058	0.667

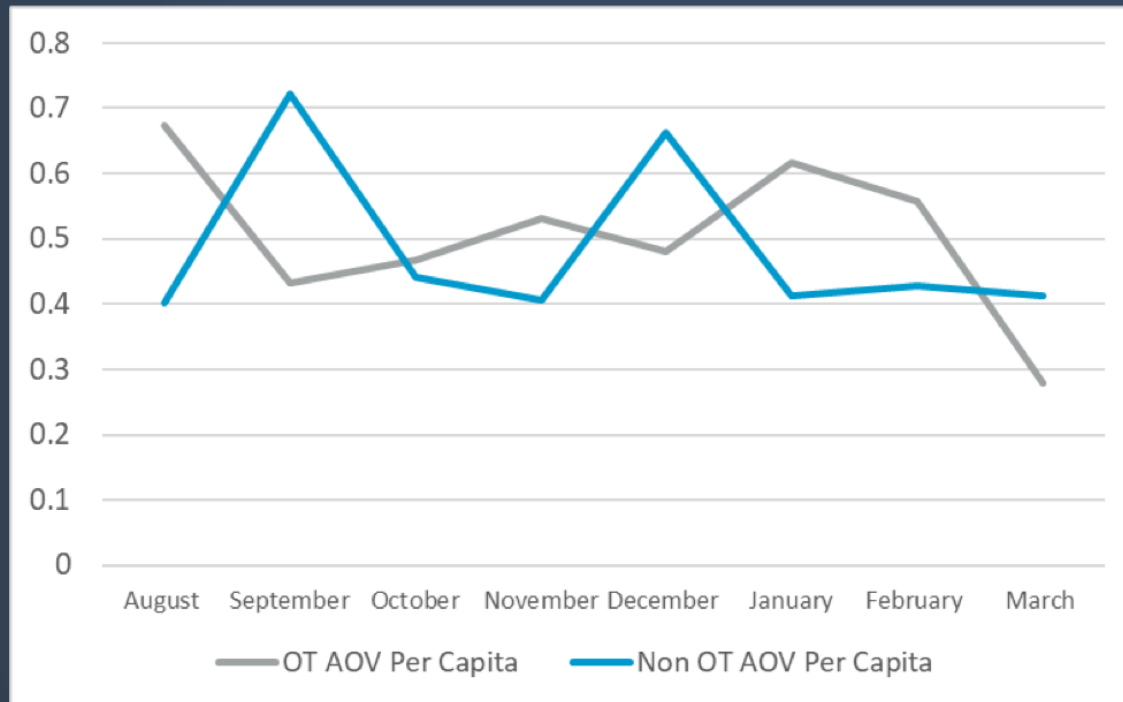
Note. $\alpha = .05$

Relationship of Trauma and Sensory Processing



Results: Acts of Violence

AOV Per Capita of OT vs non OT Youth



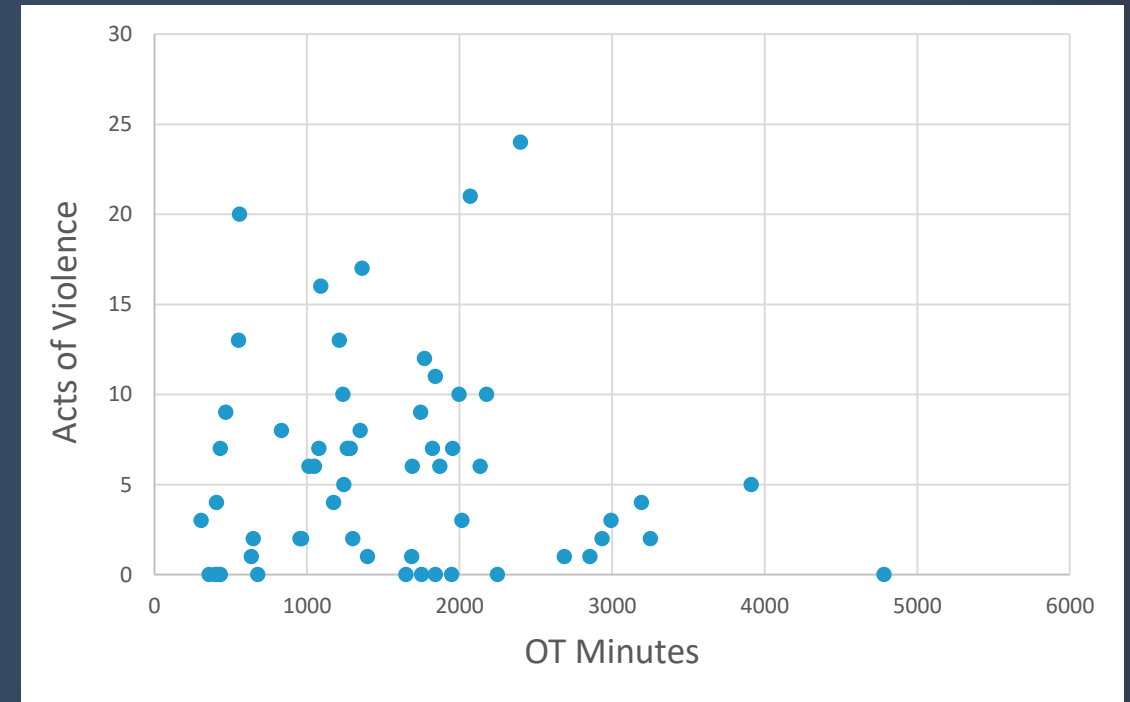
$$\alpha = .05$$

$$t(138) = 0.121, p = 0.904$$

Distribution of acts of violence:

$$\chi^2(7) = 0.2677, p = 0.999$$

Relationship of OT Minutes and AOV



$$R^2 \text{ Linear} = 0.003$$

$$y = 6.29 - 3.08 \times 10^{-4}x$$

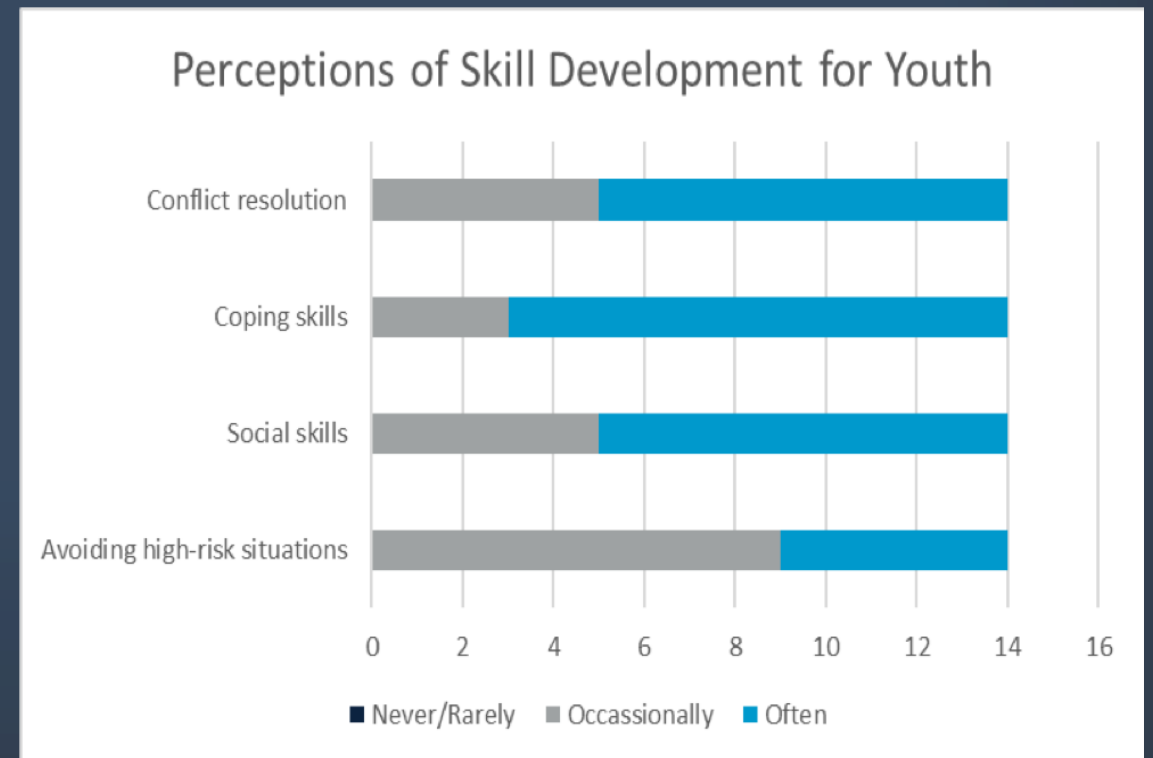
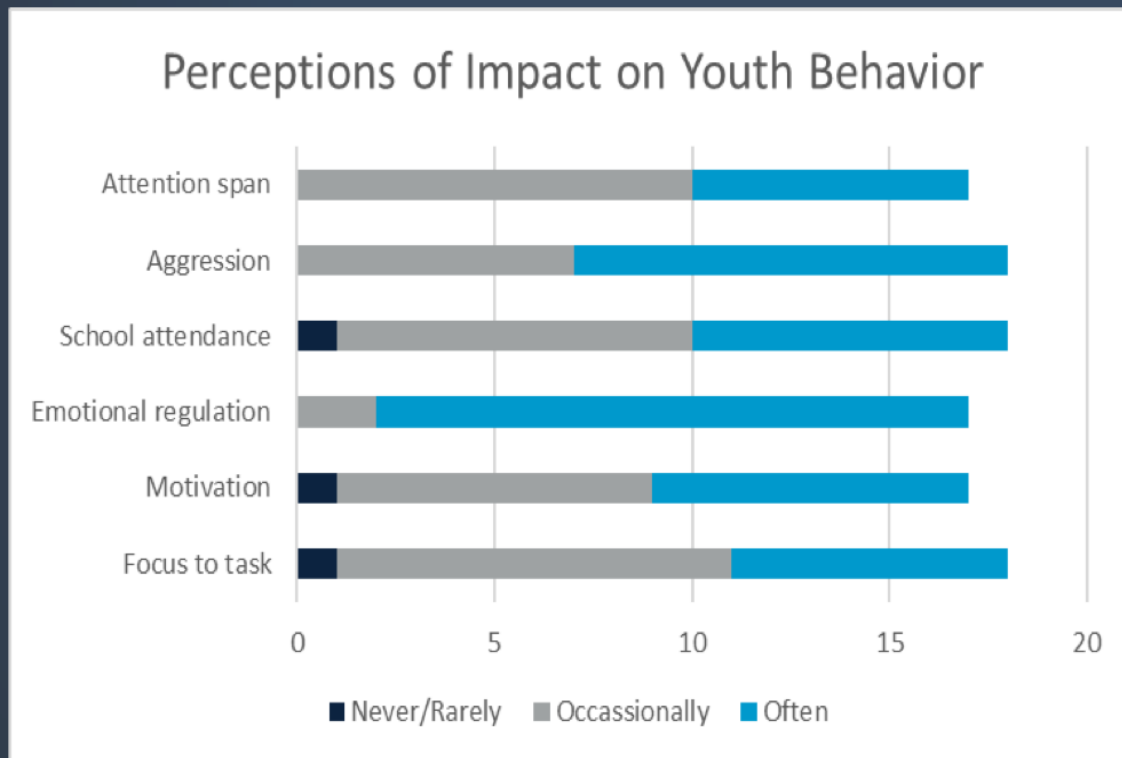
Data did not follow a linear trend

Results: Survey

N= 18 respondents

12 teachers and 6 case managers

Average 67.4 months working at facility



Discussion & Implications

- Consistent with findings of Connell (2015) and Kaiser et al. (2010), but inconsistent with prior correlational evidence
- Limitations: design, sample size, restricted data, assessment tools
- Continued research is needed

72% of youth
exhibited
abnormal sensory
systems

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graph LR; A[72% of youth exhibited abnormal sensory systems] --> B[91.2% of youth had an ACE Score >3, as compared to 14% in the general population]; B --> C[Sensory-based occupational therapy is beneficial: clinical significance despite statistical insignificance]
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Conclusions

- **Difficult research due to ethical concerns**
- **Valuable intervention**
- **Further implementation**
- **Follow-up study**