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In-text References

Background

Anxiety and sensory over-responsivity are elevated in autism spectrum disorder (ASD), and developmental delay (DD) compared to the general population (Baranek et al., 2007; Green et al., 2012).

Sensory over-responsivity (SOR) may contribute to the development of anxiety (Green et al., 2012), and have shared top-down and bottom-up mechanisms (Green et al., 2019).

Self-regulation (SR) is one mechanism that may explain shared top-down regulatory processes, and is amenable to intervention (Schmitt et al., 2015).

SR has been conceptualized as "hot" and "cool", depending on emotional qualities (Metcalfe & Mischel, 1999; Willoughby et al., 2011).

Methods

CBCL – Child Behavior Checklist (Achenbach & Rescorla, 2000)

SSP – Short Sensory Profile (Tomchek & Dunn, 2007)

BRIEF – Behavior Rating Inventory of Executive Functioning (Gioia et al., 2015)

WASI – Wechsler Abbreviated Scales of Intelligence (Wechsler, 2011)

Conclusions

"Cool" self-regulation may be a shared mechanism between SOR and anxiety.

Poor self-regulation also relates to "avoidant" responses, indicating potential shared behaviors (Hirschler-Guttenberg et al., 2015).

Self-regulation has been shown to change with intervention in TD populations (Pandey et al., 2018; Schmitt et al., 2015).

More research is needed determine treatment vs accommodation of SOR within context of valid treatments of anxiety (Muskett et al., 2019).

Future work could incorporate behavioral and neuropsychological measures of "hot" and "cool" self-regulation to supplement methods (see Sprinrad et al., 2007 and McClelland & Cameron).

Future work may also investigate the degree to shared neurobiological mechanisms of anxiety and SOR explain "cool" SR, such as amygdala – prefrontal connectivity (Bartolotti et al., 2020; Green et al., 2019).

Resources for parents, youth, and clinicians

Sensory Over Responsivity

What is Sensory Overload?

https://www.understood.org/en/articles/what-is-sensory-overload

Why is there a link between Sensory Overload and Anxiety?

https://www.understood.org/en/articles/sensory-overload-anxiety

Self Regulation

Self Regulation: What you need to know

https://www.understood.org/en/articles/trouble-with-self-regulation-what-you-need-to-know

How to help kids with self-regulation

https://childmind.org/article/can-help-kids-self-regulation/

Anxiety

What is anxiety, for kids

https://www.youtube.com/watch?v=FfSbWc3O_5M

Research Resources

Assessment of Self-Regulation -

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2121588/

https://doi.org/10.1111/j.1750-8606.2011.00191.x

How do we factor sensory sensitivity into treatment for CBT, an evidence-based treatment for anxiety? (Muskett et al., 2019)

https://link.springer.com/article/10.1007/s40489-019-00159-w

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