



Supporting the Regulation of Children with IDD and Trauma in School Settings: A Neuroscience-Informed Approach for School Counselors

Children and youth with intellectual and developmental disabilities (IDD) experience higher rates of trauma exposure than their non-disabled peers, including increased risk of abuse, restraint, seclusion, and medical traumatic stress (Hoover, 2020). These experiences often go unrecognized or misattributed to the child's disability (e.g., "diagnostic overshadowing"), which can delay appropriate mental health supports including trauma-informed care and regulation strategies (Hoover, 2020).

When children are exposed to abuse, neglect, or maltreatment, they often develop protective survival responses that help them feel safer in the moment (Schwartz, 2021). In school, these responses are sometimes labeled as "behavior problems" rather than understood as nervous system-based adaptations to threat and approached with curiosity and compassion (Perry et al., 2017).

Many individuals with IDD and autism also experience complex trauma – multiple or chronic traumatic events often beginning in early childhood – and may show intense and long-lasting stress responses after adverse events. These factors are especially important for school counselors to recognize when supporting students with IDD in school settings.

Neuroscience-Informed Stress States (Adapted from Polyvagal Theory Concepts)

A neuroscience-informed framework helps us understand behavior in children who have experienced trauma as a **stress response of the nervous system**, not a “problem to fix.” There are three observable stress response patterns students may exhibit:

- a regulated/engaged state (safer, connected, available for learning);
- mobilized stress (fight-flight activation); and
- overwhelmed/shutdown patterns (withdrawal, dissociation, fatigue).

Because traumatic stress is often experienced and expressed through the body, children with IDD and communication differences may struggle to describe their internal states (van der Kolk, 2014; Perry, 2006).

A neuroscience-informed approach guides clinicians to read body-based cues, prioritize coregulation and felt safety, and shift the question from “How do I stop this behavior?” to “What does this child need to feel safe right now?”

Why This Neuroscience-Aligned Framework Matters in School Settings

1. **It reframes “problem behaviors” as stress responses:** Children who have experienced trauma may demonstrate behaviors such as aggression, defiance, withdrawal, dissociation, or hyperactivity. These behavioral responses are nervous system adaptations to perceived threat, not intentional misbehavior.

This shift in understanding:

- Reduces shame for the child;
- Supports trauma-informed care; and
- Guides adults away from punishment and toward connection.

2. **It prioritizes safety before insight:** Trauma research and developmental neuroscience tells us that a dysregulated child cannot readily access the thinking part of the brain for reflection, reasoning, or problem-solving. Therefore, for children who have experienced trauma, safety, predictability, and relational connection must come before Cognitive Behavioral Therapy (CBT), verbal trauma processing, and skill building (Perry, 2006).

Instead, interventions like grounding, rhythm, play, movement, and co-regulation are foundational, not extras in trauma treatment (Perry et al., 2017).

3. **It supports evidence-based “bottom-up” regulation strategies:** Bottom-up regulation means using the body to support regulation. The following strategies help reset the body’s stress response system and are widely supported across the trauma, developmental, and sensory-processing literature:

- Deep breathing and breath work
- Mindful sensory awareness (e.g., 5-4-3-2-1 grounding)
- Body posture and movement (e.g., swaying and tapping)
- Sensory input (e.g., rocking, swinging, pressure, temperature)

(Perry et al., 2017)

These bottom-up strategies help calm the nervous system before expecting emotional or behavioral control from a child, which is particularly important for autistic children and children with IDD, who often show heightened sensitivity to threat and safety cues in their surrounding environment.

A Case Study Using a Neuroscience-Informed Lens

Deren is a 7-year-old second grader with autism who recently experienced a fire in his house and had to move in with the rest of his family. Since the fire, his teacher, Ms. Hernández, has noticed that Deren’s “outbursts,” which used to only happen once a month, now happen 3 or 4 times a day, typically when the school schedule changes or it’s time to transition to a new activity. Deren’s outbursts typically consist of crying and yelling. It always takes Deren a while to calm down, and afterwards he is tired. Ms. Hernández refers Deren to the school counselor, Mr. Ortiz, because she is unsure how to best support him. Mr. Ortiz understands Deren’s behavior through a neuroscience and trauma-informed lens.

Deren’s behavior reflects a heightened stress load after a traumatic event. The displacement disrupted his sense of safety and predictability. Deren already relies on routine and environmental consistency for regulation, making transitions strong threat cues resulting in stress-response patterns of emotional escalation to exhaustion and withdrawal.

Mr. Ortiz helps Ms. Hernández understand what is happening in Deren’s nervous system when he begins crying and yelling in the classroom. He also suggests the following:

- **Increase predictability:** Visual schedules, warning before transitions, and first-then boards. These supports cue safety and reduce transition-related threat.
- **Build safety in the nervous system:** Consistent routines, offering choice when possible, connection-based check-ins, and preferred activities after hard transitions.
- **Support sensory regulation:** Movement breaks, deep pressure, quiet spaces, fidgets or comfort items, and any usual or preferred sensory regulation strategies Deren already uses.
- **Teach and practice bottom-up skills in counseling:** Deep breathing, rhythm/swaying, 5-4-3-2-1 grounding, and brief body-based resets, practiced when Deren is calm and well-regulated.

(Perry et al., 2017)

Summary

In summary, a neuroscience-informed framework can be especially useful for working with children with IDD and autism who experience higher rates of trauma than their non-disabled peers and who often have higher sensitivity to environmental stimuli. It can help counselors and teachers understand a child's behavior through the lens of the nervous system and provide strategies for supporting the child to feel safer and more connected in the school environment.

Resources

Simple Strategies for Regulation with Young Kids

- [Alternate Nostril Breathing \(Known as Nadi Shodhana\)](#)
[youtube.com/watch?v=HsUlnl1reIU](https://www.youtube.com/watch?v=HsUlnl1reIU)
- [‘Voo’ Breathing](#)
[youtube.com/watch?v=oYOKFi4m-ic](https://www.youtube.com/watch?v=oYOKFi4m-ic)
- [Break Breathing](#)
[youtube.com/watch?v=BYp9yDnQVU0](https://www.youtube.com/watch?v=BYp9yDnQVU0)

Neuroscience-based Training for School Counselors

- [The Neurosequential Model in Education](#)
neurosequential.com/nme
- [National Institute for the Clinical Application of Behavioral Medicine](#)
nicabm.com/program/brain-trauma/?itl=store

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