



Sensory Webinar Summary for Neurodivergence Wales by Nathalie Shek

1. Introduction

This webinar, led by an experienced occupational therapist with over 20 years of practice, focused on sensory processing and integration, particularly in the context of neurodivergent individuals. The session aimed to provide a foundational understanding of sensory systems and offer practical strategies to support individuals with sensory processing challenges.

2. Key points

2.1. Understanding Sensory Processing

- Sensory processing is how the brain receives, interprets, and responds to sensory input from the environment.
- It underpins all human development and functioning, beginning in utero.
- There are eight sensory systems:
 - The traditional five: sight, sound, smell, taste, and touch.
 - Three additional systems:
 - Vestibular (balance and spatial orientation)
 - Proprioception (body awareness through muscles and joints)
 - Interoception (internal body signals like hunger, thirst, and emotional states)

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2.2. Sensory Integration and Regulation

- Sensory integration allows individuals to respond appropriately to sensory input.
- Regulation is the ability to manage emotional and physiological states.
- Co-regulation (support from others) precedes and supports the development of self-regulation.
- The Window of Tolerance model describes the optimal zone of arousal where a person is able to function, process information, and cope with stress in a manageable way.

2.3. Sensory Processing Differences

There is no “right” or “wrong” way to process sensory input, but sensory processing differences recognise that people’s sensory systems work differently. These differences can affect daily life, comfort, learning, participation, or social interaction.

Individuals may be:

- Over-responsive or over reactivity (sensory avoiders)
- Under-responsive or under reactivity (passive or withdrawn)
- Sensory seekers (craving intense input)
- or mixed (all of the above)

2.4. Stress and Sensory Overload

- Sensory overload can trigger the fight, flight, or freeze response.
- Chronic stress without resolution can lead to burnout.
- Behavioural responses often mask underlying sensory challenges.

2.5. Strategies and Interventions

- Bottom-up approaches (sensory-based, body-first) are more effective than top-down (cognitive) strategies in moments of dysregulation as bottom-up approaches target the nervous system directly.
- When someone is dysregulated (in fight/flight/freeze), their thinking brain (frontal lobe) isn’t fully online. Strategies like deep pressure, movement, breathing, or calming sensory input can help bring the body back into the window of tolerance.

- Use of multi-sensory activities (e.g., swinging, deep pressure, oral motor input) can support regulation.
- Proprioception is a particularly powerful tool for calming the nervous system.
- Calming spaces and sensory-based interventions when tailored for that individual at home and in the school environment.

2.6. Notable Quotes

- “Before anything else, we are sensory creatures”
- “Regulation doesn’t mean calm—it means connection”
- “There’s no one-size-fits-all. Sensory differences are unique to each individual”

3. Actionable Takeaways

- Be a sensory detective: Observe and understand the purpose behind behaviours
- Prioritise co-regulation: Build trust and attunement with children to support their emotional development
- Use sensory ladders and tools: Visual aids like sensory ladders help children identify and communicate their states
- Incorporate sensory strategies throughout the day: Especially before and potentially after overwhelming events, but seek advice from your Occupational Therapist
- Tailor interventions: What works for one child may not work for another - trial and error is key with support from your Occupational Therapist
- Caregivers need to support themselves first: Apply the “oxygen mask” analogy - care for yourself to better support others.

4. Next Steps / Closing Remarks

The webinar concluded by emphasising the importance of individualised and tailored support and inclusive environments that respect sensory differences and are neuro-affirming. The speaker encouraged continued learning and collaboration among caregivers, educators, and professionals to foster environments where neurodivergent individuals can thrive.